Policy Dialogue on Infrastructure Financing Strategies for Sustainable Development in North and Central Asia

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Improving public investment efficiency for infrastructure development

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UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific

Current Situation

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- **Infrastructure Needs in Central Asia***

  = approx. **$40 billion** per year (8% of GDP) or $565 billion (2016-2030)

  ↗ by around **3%** of GDP

*Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan

- **Tight fiscal constraints**

  Need to prioritize investment / Maximize value-for-money

- **Typical issues with infrastructure projects**
  - Poor project selection (e.g. based on political considerations)
  - Delays in design and completion of projects
  - Corrupt procurement practices
  - Cost over-runs / Incomplete projects
  - Failure to operate and maintain assets effectively

Project Cycle

Improving efficiency throughout the project cycle

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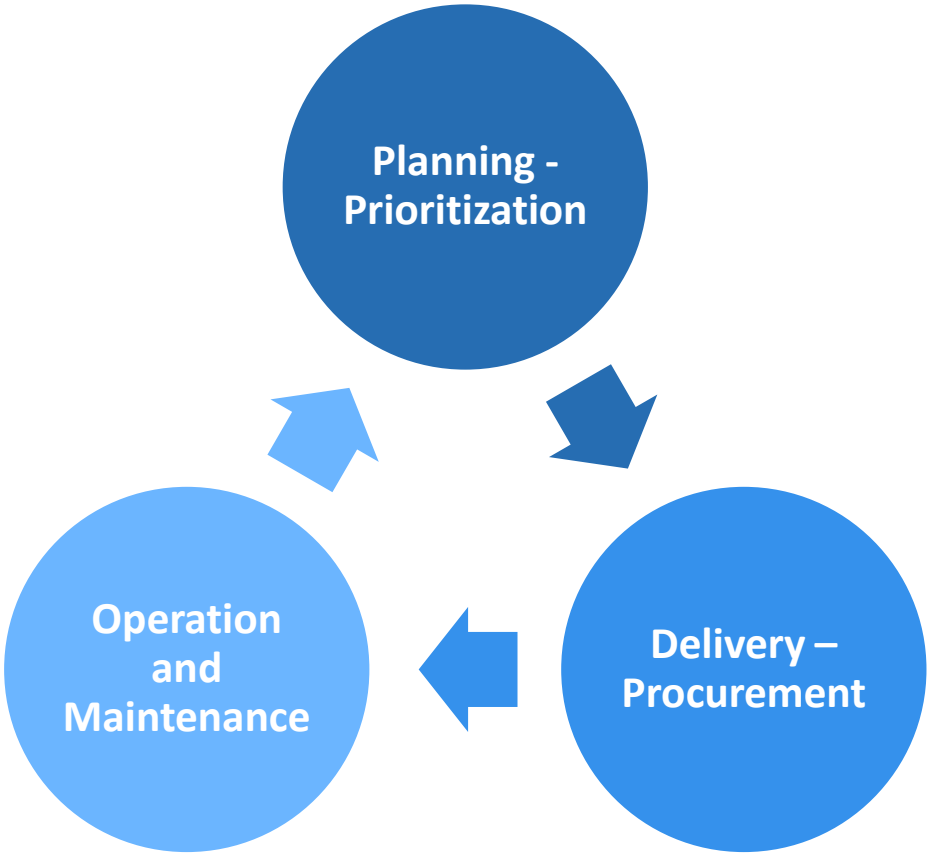

Why is public investment efficiency important?

A $125 billion opportunity in the region

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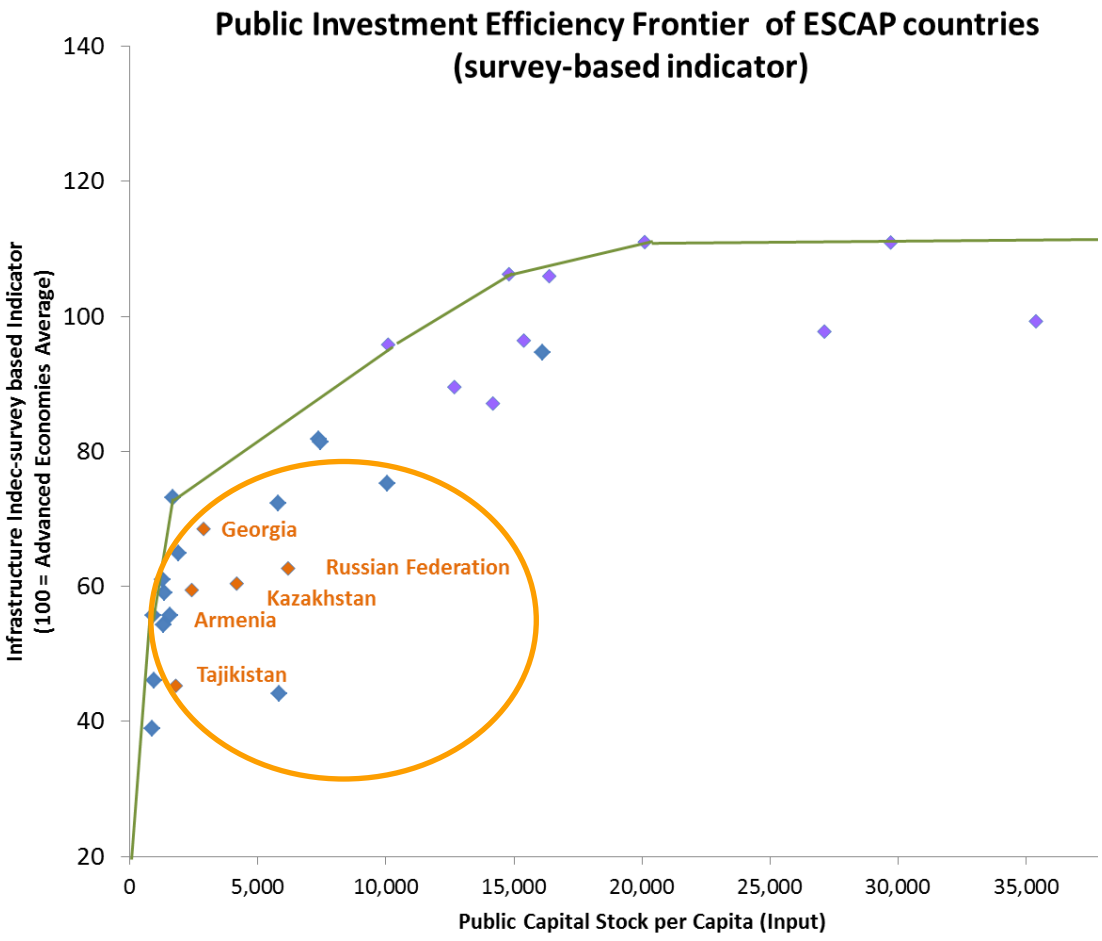

Some countries achieve the same level of infrastructure quality with less investment

→ Efficiency Gap estimated to **22%** (Central Asia)

→ Potential savings (till 2030) = **$125 billion**

Boosting productivity can reduce infrastructure spending by **40%** according to McKinsey

Agenda

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- ✓ Strengthening Planning and Prioritization
- ✓ Streamlining infrastructure project delivery
- ✓ Making the most of infrastructure assets

Strengthening Planning and Prioritization
Infrastructure Plan

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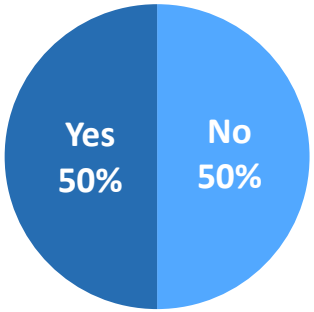
✓ Does the country have a National or Sub-National Infrastructure Plan?

- Align investment with countries priorities / development objectives (e.g. SDG)
- Provide a long-term vision (infrastructure assets can last 50 years)
- Assess infrastructure deficiencies
- Coordinate different infrastructure sectors
- Identify the possibility of charging users
- Highlight policy reforms required (e.g. tariff)
- Develop in consultation with stakeholders



Source: GIH Compass based on 48 countries

Strengthening Planning and Prioritization
Appraisal Guidelines

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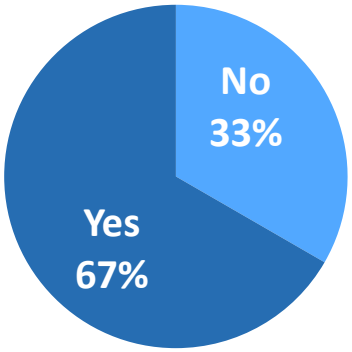
✓ Does the country have guidelines for the appraisal of infrastructure projects?

- Ensure investment decisions based on realistic priorities and cost estimates



Source: GIH Compass based on 48 countries (guidelines are only at the sector level for some countries)

- Define the minimum level of information required
- Ideally detailed project-level information (full-fledge feasibility studies) and quantification of social, environmental and economic effects (i.e. **social cost-benefit analysis**)

= good basis for prioritization but …

- Lack of capacity to provide extensive economic analysis
- Limited information on project proposals

→ A pragmatic evidence-based selection system is needed to compare projects / analyze project at the portfolio level

Strengthening Planning and Prioritization

Multi-criteria approach

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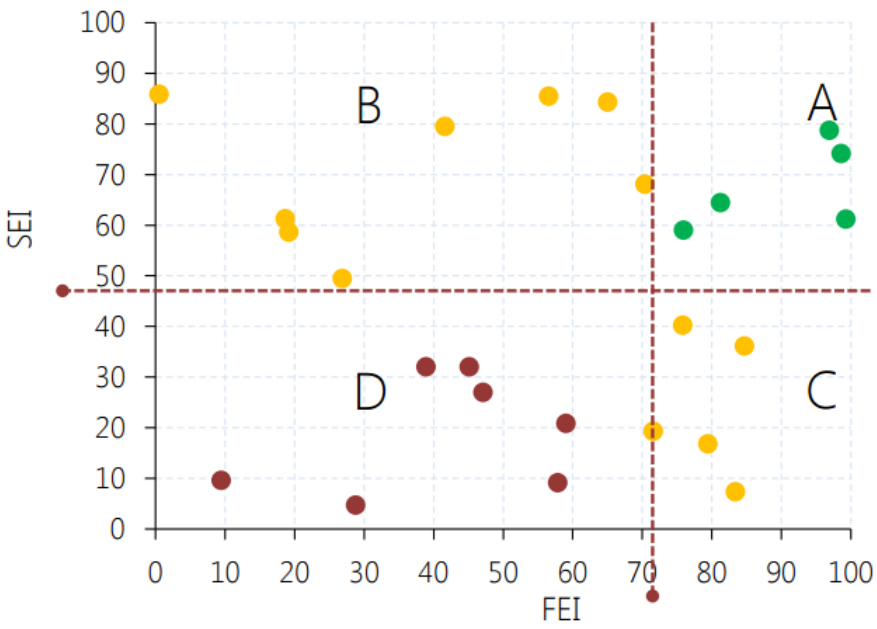
Example: World Bank's Infrastructure Prioritization Framework (IPF)

- Multi-criteria decision approaches formalize the inclusion of non-monetary and qualitative factors into decision analysis
- IPF synthetizes project-level indicators into 2 indices: social-environmental and financial-economic



A Higher priority
B Higher social/environmental priority
C Higher financial/economic priority
D Lower priority

✓ No need to monetize all benefits and costs

✓ Designed for application within only one sector

Strengthening Planning and Prioritization
Gender Considerations

Target 5.4: Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies …

- Infrastructure projects cannot be assumed to deliver benefits to men and women equally

Gender mainstreaming in infrastructure (conscious approach / explicit)

- Gender involvement in consultation
- Supporting women employment in the project
- Key performance indicators with regard to female benefits
- Monitor against gender impact →Lack of sex-disaggregated data is an issue

Agenda

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- ✓ Streamlining infrastructure project delivery
- ✓ Making the most of infrastructure assets

Streamlining infrastructure project delivery

Accelerating permit approvals and land acquisition

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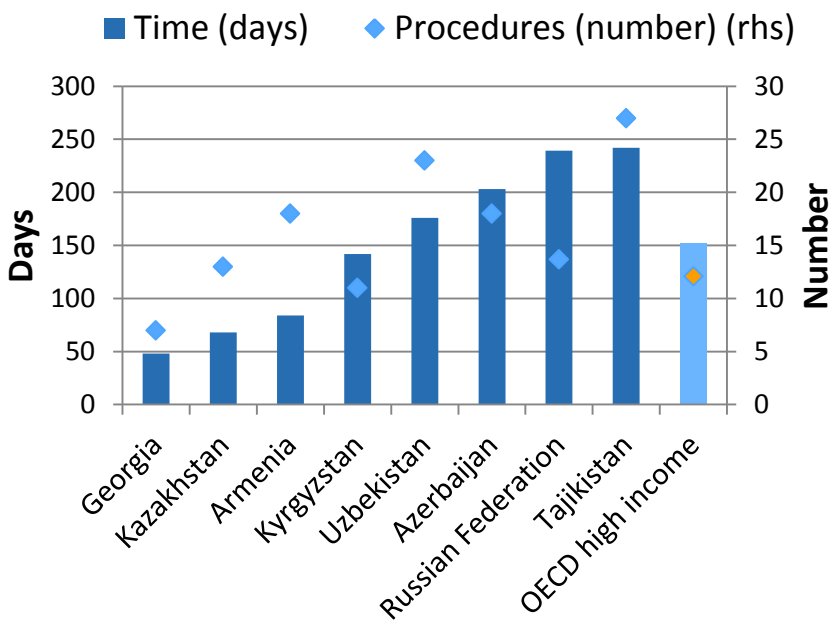
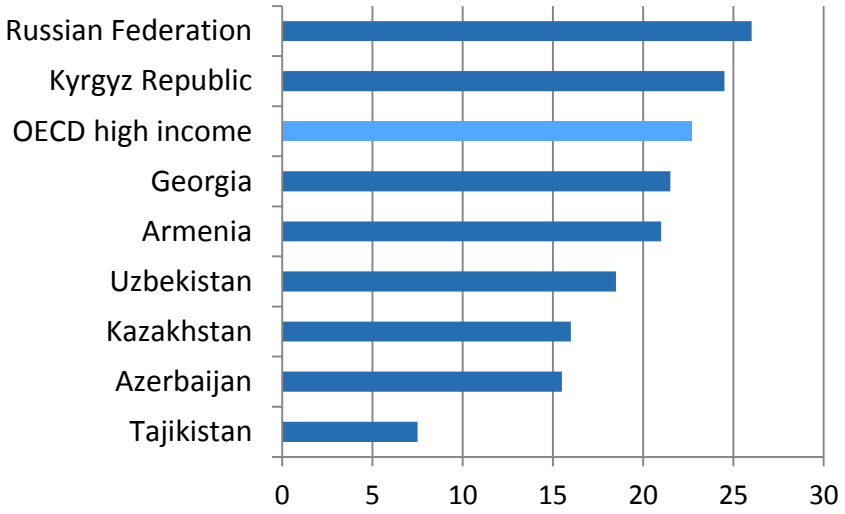
In India, 70 to 90% of road projects suffer a 15 to 20% delay due to challenges in land acquisition

Source: McKinsey (how to save $1 trillion a year)

Construction Permits



Quality of the land administration index (0-30)



Source: World Bank Doing Business

- ✓ "one-stop-shop" permitting and clear allocation of responsibilities
- ✓ Quick dispute resolution mechanisms, and land titles register

Streamlining infrastructure project delivery

Enhancing governance

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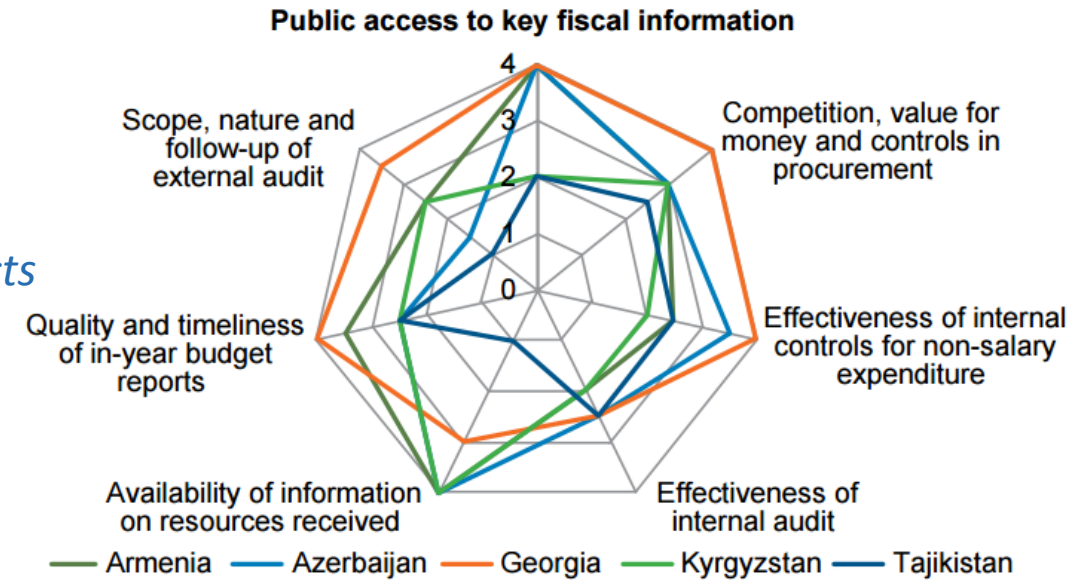
- ✓ Internal controls / Audits

86 % of public infrastructure projects are above budget

Source: Flyvpjerg et al. / data: 258 Infra Projects over 1910-2000 (Europe / USA / Japan)



Source: ESCAP Survey 2016 base on PEFA database

- ✓ Reducing corruption

estimated globally at between 5 to 20 per cent of construction costs

Source: Kenny, C. (2006). WB Working Paper 4099

Income and asset declaration of government officials (financial disclosure and conflicts of interests) - example Georgia

Streamlining infrastructure project delivery

Improving Public Procurement

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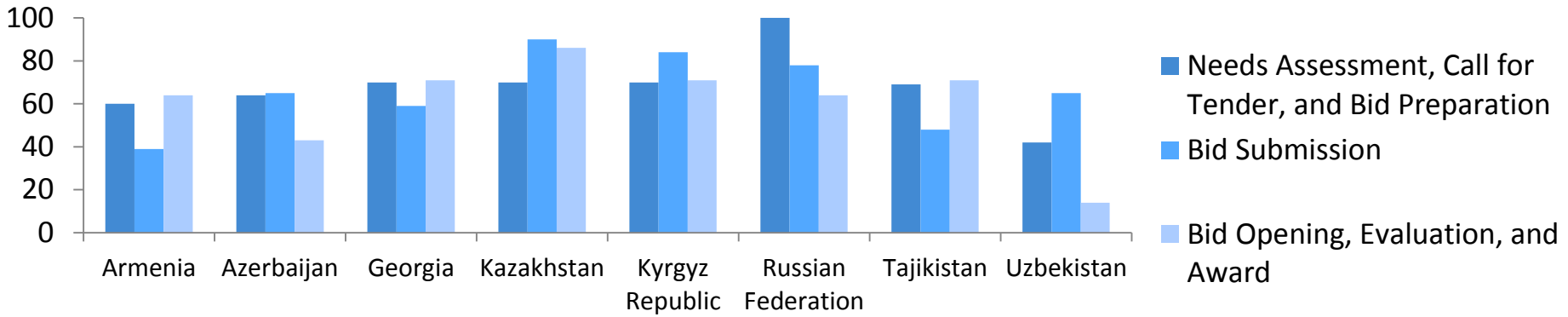
✓ Benchmarking of Public Procurement in the region



Source: World Bank (http://bpp.worldbank.org/data/exploreindicators/procurement-life-cycle)

- ✓ Using e-procurement systems (e.g. Georgia: $110 million savings – 14% of contract value) / blacklisting companies with poor performance
- ✓ Selecting the best procurement routes (e.g. design-bid-build vs. design-build / EPC (Engineer-Procure-Construct) vs. Public-Private Partnerships)
  - Differences include Complexity, Scope for Innovation, and Risk Allocation
  - Cheaper construction costs vs. Cheaper lifecycle costs

Agenda

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- ✓ Strengthening Planning and Prioritization
- ✓ Streamlining infrastructure project delivery
- ✓ Making the most of infrastructure assets

Making the most of infrastructure assets

Moving away from Build, Neglect, and Rebuild paradigm

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- ✓ Set aside funds for maintenance

  Every dollar spent on regular road maintenance can save more than $5 on refurbishing and rebuilding of road…

  Maintenance budgets often cut (no immediate consequences)

  → *Dedicated funds (from user taxes and user charges) decouple maintenance resources from annual appropriation discussion*

- ✓ Decisions take into account immediate capital + future operation and maintenance costs

  Sector Medium-Term Plan

- ✓ Regularly assess and catalog the condition of infrastructure

  Modern maintenance techniques such as remote asset inspection , feedback systems from users, etc.

- ✓ Extend asset life by integrating resilience considerations

  Resilient design codes – protective barriers

Making the most of infrastructure assets

Avoiding political bias towards new infrastructure projects

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- ✓ **Demand management** techniques to reduce the need for additional infrastructure by smoothing the demand and shifting load off-peak

  (e.g. congestion charges, energy efficiency standards, peak pricing, water education programme)

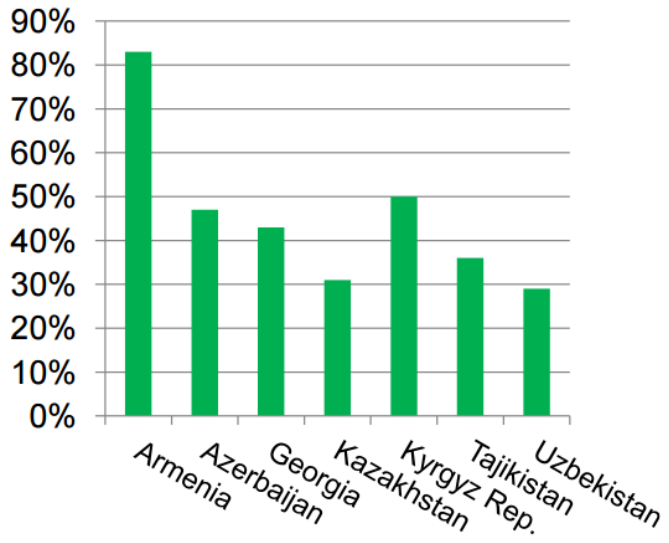
- ✓ **Reducing** transmission and distribution **losses** in water and power

  Non-Revenue Water = water "lost" before it reaches the customer

  Need to realize the magnitude of the issue and address it (e.g. performance incentives)

  often costs less than **3%** of adding the equivalent in new production capacity + faster

High Non-Revenue Water (%)



Source: WB Presentation - Mantovani (2014)

Making the most of infrastructure assets

Optimizing usage

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- ✓ **Maximizing asset utilization**

  Intelligent transport systems can reduce headways between vehicles (e.g. airport and port capacity can double or triple for a fraction of the cost) and address specific bottlenecks (e.g. road e-tolling)

  Measure to encourage users to use the full capacity (e.g. high-occupancy lanes)

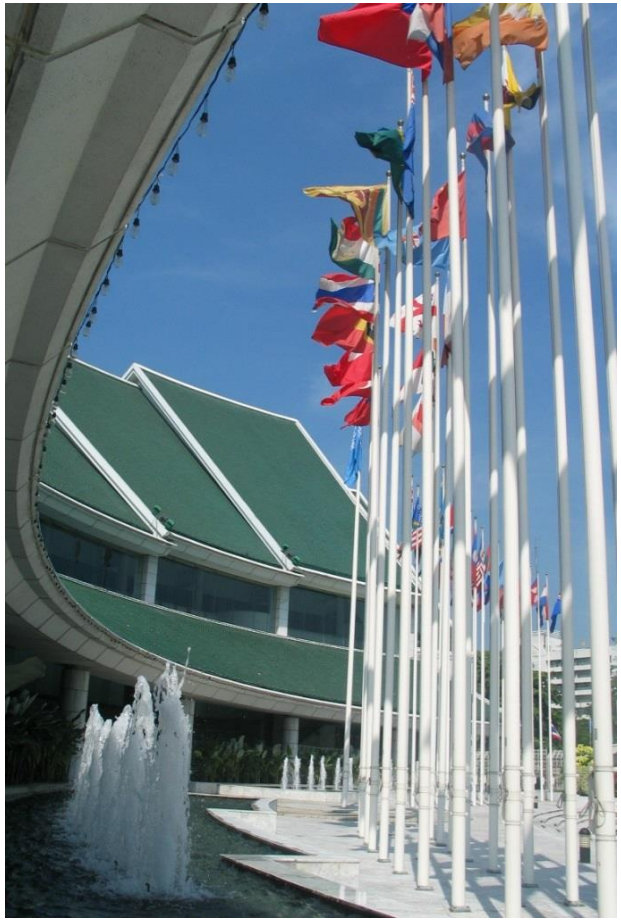
- ✓ **Leveraging additional source of revenues**

  Some airports realize more than 50% of their revenues from retails, hotels, etc.

Conclusion

Significant savings can be achieved by

- Improving project selection and introducing sustainability as well as gender considerations
- Streamlining infrastructure project delivery, improving governance and allocating sufficient funding to maintenance
- Maximizing the use of existing assets by managing demand and leveraging additional sources of revenues



Th@nk you

website: http://www.unescap.org/our-work/macroeconomic-policy-financing-development/infrastructure-financing-and-public-private-partnerships

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