

## SECTOR ASSESSMENT (SUMMARY): MULTISECTOR<sup>1</sup>

### Sector Road Map

#### 1. Sector Performance, Problems, and Opportunities

1. **Roads.** Road infrastructure is the predominant transport mode in Indonesia, accounting for some 85% of passenger and 90% of freight transport. About 92% of national and 59% of regional roads are serviceable, against the benchmark quality targets of 95% and 80%, respectively. During 2005–2014, the annual average growth of the number of vehicles was about 9%, while national road network grew by 1.4% annually.<sup>2</sup> Traffic time average 2.60 hours per 100 kilometers, compared with 1.10 hours in Malaysia, 1.20 hours in the People's Republic of China, 1.35 hours in Thailand, and 2.00 hours in Viet Nam. Such long trip times in Indonesia (both within and between cities) result in high logistics costs, which reached 24% of gross domestic product (GDP) in 2015,<sup>3</sup> and high vehicle emissions, both of which have negative economic and social impacts. In Jakarta, inadequate road infrastructure is a factor behind the city's notorious traffic jams, causing an estimated Rp65 trillion (0.6% of GDP) in losses annually.

2. **Water resources.** The country's available water amounts to around 3,221 billion cubic meters (m<sup>3</sup>) per year, of which 691.3 billion m<sup>3</sup> per year is considered reliable for regular use. The irrigation area ratio in Indonesia is around 62%, compared to 92% in Malaysia and 90% in the People's Republic of China. Only 55% of the irrigation system is functioning at full capacity because irrigation systems are in bad need of repair, limiting yields and reducing cropping intensity.<sup>4</sup> Some 11 million people are highly exposed to flooding risks; flood-related economic losses have been estimated at \$430 million per year. More than 10% of the 5,590 main rivers in Indonesia are prone to flooding that disrupts vital transport arteries and hampers trade. Dam storage capacity is 54 m<sup>3</sup> per capita, far below the 1,975 m<sup>3</sup> per capita targeted in the National Long-Term Development Plan, 2005–2025.<sup>5</sup>

3. **Water supply and sanitation.** Indonesia's urban population is increasing by about 4% annually, making the country one of the most rapidly urbanizing countries in the world. However, there is a significant gap in the provision of basic services in the urban areas: in 2015, 94% of the urban population had access to improved water sources (against 100% in Malaysia and 98% in Thailand, and only 72% had access to improved sanitation facilities (against 96% in Malaysia and 90% in Thailand).<sup>6</sup> Only 1% of urban wastewater is treated. Over 60% of the urban population has septage tanks, but only 4% of septage is treated.<sup>7</sup> This has significant economic costs: in 2011, some 9.7 million people required medical treatment for diarrhea; in 2007, poor sanitation and hygiene practices are estimated to have caused an economic loss of \$6.3 billion (2.3% of GDP).

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<sup>1</sup> This summary covers the road, water resources, and water supply and sanitation sectors. It draws on (i) sector summary assessments done for the preparation of the country partnership strategy, 2016–2019 for Indonesia of the Asian Development Bank (ADB); and (ii) PT Tusk Advisory, Nippon Koei, Oriental Consultants & Maxeed. 2014. *Medium Term Economic Infrastructure Strategy: Background Study for RPJMN 2015–2019*. Commissioned by JICA.

<sup>2</sup> P. McCawley. 2015. Infrastructure Policy in Indonesia, 1965 – 2015: A Survey. *Bulletin of Indonesian Economic Studies*. 51 (2). pp. 263-285.

<sup>3</sup> In 2015, Thailand's logistics costs were 20.0% of GDP, Malaysia's 13.0% of GDP, and Japan's 10.6% of GDP.

<sup>4</sup> Ministry of Public Works and Housing. 2014. *Irrigation Systems Rapid Assessment*. Jakarta.

<sup>5</sup> Government of Indonesia. 2007. *National Long-Term Development Plan 2005-2025*. Jakarta. (Law No. 17/2007).

<sup>6</sup> WHO/UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation (wssinfo.org).

<sup>7</sup> World Bank. 2013. *Urban Sanitation Review: Indonesia Country Study*. Washington DC.

4. **Long and cumbersome land acquisition process.** Land acquisition has been a major constraint to infrastructure delivery in Indonesia. To address this constraint, in 2012 the government promulgated the Law on Land Acquisition for Development in the Public Interest (Law No. 2/2012) and has subsequently adopted new implementing regulations. The new land acquisition law, which took full effect in January 2015, gives the role of facilitating land acquisition to the National Land Agency, while the budget for land acquisition has remained with government implementing agencies. The new law provides clear procedures and time frames for involuntary land acquisition. The recent application of this law suggests that the overall land acquisition process may take less than 2 years, a significant improvement from the past.

5. **Insufficient project preparation.** With the full implementation of the new land acquisition law and ongoing efforts to strengthen the procurement systems in the MPWH, poor project preparation has become a critical constraint to the efficient and effective delivery of a large volume of public infrastructure. Inadequate project preparation is largely due to (i) lack of resources to complete the required assessments, surveys, designs, and environmental and land acquisition clearances to make projects ready for implementation; and (ii) low quality feasibility studies and detailed engineering designs that often need to be redone during implementation, causing cost overruns and delays. On average, only 85% of the allocated capital budget tends to get disbursed, mainly due to incomplete readiness of projects for land acquisition and civil works. Inadequate design and construction supervision also lead to poor quality construction and to infrastructure that fails to reach its full economic life.

6. **Poor infrastructure planning and delivery.** Infrastructure provision has been adversely affected not only by a shortage of money, but also poor value for money due to—in addition to the poor quality of project preparation—poor infrastructure planning and delivery. This has been mainly due to a focus on infrastructure preservation rather than longer-term planning, inappropriate design standards, project fragmentation as reflected in the prevalence of small and short contracts, poor construction quality, and ineffective maintenance.<sup>8</sup>

7. **Weak domestic consulting industry.** The capacity of domestic consulting firms working in the public works areas is generally weak. Therefore, the significant increase in government infrastructure investments, the growing complexity of projects, and the government's intention to mainstream international best practices and technology in project design and implementation will pose a challenge to the domestic consulting industry. It is therefore important to attract reputable international consulting firms to work on infrastructure project preparation. International firms have been reluctant to engage with government agencies for public investment project preparation mainly due to the following factors: the public procurement system's restrictions on foreign firm participation in public bidding, low fee rates and small size of consultant contracts, use of 1-year contracts, payment in local currency under the consultant contracts, and reputational risk.<sup>9</sup> Strong domestic engineering and consulting firms tend to shy away from government assignments due to similar issues as well as the perception of high transaction costs in working under government contracts compared with private sector contracts.

<sup>8</sup> D. Ray and L.Y. Ing. 2016. Survey of Recent Developments: Addressing Indonesia's Infrastructure Deficit. *Bulletin of Indonesian Economic Studies*. 52 (1). pp. 1–25. In 2015, 93% of the contracts signed by the MPWH were single-year contracts, under which construction is often rushed, resulting in substandard quality and weak supervision. The use of multiyear contracts will help address this by better capturing economies of scale, allowing adequate time for effective implementation, and reducing the transaction cost to the government.

<sup>9</sup> The public procurement system (i) gives preference to national consultants, (ii) requires in-country registration and incorporation for participation in bidding, (iii) allows for only up to 49% of foreign ownership in a locally registered consultancy business, and (iv) uses domestic rather than international market rates for budgeting purposes.

## 2. Government's Sector Strategy

8. **Addressing the infrastructure gap.** By discouraging investment and raising business costs, insufficient infrastructure holds Indonesia back from achieving its inclusive growth and poverty reduction potential. The gap in infrastructure provision is due to a long period of underinvestment: overall infrastructure spending in Indonesia dropped from 8% of GDP during 1995–1997 to about 4% of GDP during 2008–2014, well below the estimated investment need of 6%–7% of GDP.<sup>10</sup> Indonesia's National Medium-Term Development Plan, 2015–2019 aims at significantly reducing the gap in infrastructure provision in the country.<sup>11</sup> Among the plan's most prominent objectives is the “100-0-100 agenda,” which aims to ensure 100% access to decent water, reduction of slum areas to 0%, and attainment of 100% access to decent sanitation, all by 2019.

9. **Ambitious infrastructure investment acceleration agenda.** During 2015–2019, the total infrastructure investment program is Rp4,800 trillion (against Rp1,900 trillion under the RPJMN, 2010–2014), implying an average infrastructure investment requirement of 8% of GDP over this period. Of the total investment program, Rp1,400 trillion (29%) is expected to come from the national government, Rp550 trillion (11%) from the local governments, Rp1,100 trillion (23%) from state-owned enterprises, and Rp1,750 trillion (37%) from the private sector.<sup>12</sup> During 2015–2019, the public investment program of the Ministry of Public Works and Housing (MPWH) is estimated at Rp660 trillion or 47% of the government's infrastructure program.<sup>13</sup> The government investment is expected to increase from 3.1% of GDP in 2014 to 6.2% in 2019.

10. **Significant increase of infrastructure budget in 2015.** The reform of fuel subsidies in January 2015 has enabled the government's infrastructure budget to increase from Rp144.4 trillion in 2014 to Rp280.3 trillion in 2015 and to Rp302.6 trillion in 2016. The line-ministries are responsible for delivery of more than 50% of the government's infrastructure budget.<sup>14</sup> In 2015–2016, about 37% of the government's infrastructure budget was allocated to the MPWH. The increase in infrastructure spending has been accompanied by institutional reforms. During 2014–2015, the government (i) established a dedicated office on land acquisition at the National Land Agency, (ii) strengthened the procurement units of government agencies and rolled out a national e-procurement system, (iii) increased use of advance procurement and multiyear contracts for infrastructure projects, and (iv) set up a budget realization evaluation and monitoring team to address implementation constraints the central and subnational levels.<sup>15</sup> To improve civil works procurement and quality of infrastructure, in 2015 the MPWH adopted regulations on procurement and standards of design-and-build contracts and on sustainable construction of infrastructure.<sup>16</sup>

<sup>10</sup> B. Bhattacharyay. 2010. Estimating Demand for Infrastructure in Energy, Transport, Telecommunications, Water and Sanitation in Asia and the Pacific: 2010–2020. *ADB Institute Working Paper Series*. No. 248. Tokyo.

<sup>11</sup> Government of Indonesia. 2015. *National Medium-Term Development Plan, 2015–2019*. Jakarta.

<sup>12</sup> Despite recent progress, private infrastructure investment remains low at 0.5% of GDP compared to 2.3% of GDP during 1995–1997. This is mainly due to (i) fragmented legal and institutional framework, and (ii) lack of project preparation capacity of government contracting agencies. A. Haydarov. 2016. Special Treatment Needed for Public-Private Partnerships. *The Jakarta Post* (Indonesian Infrastructure Outlook). 8 August 2016.

<sup>13</sup> Government of Indonesia, Ministry of Public Works and Housing. *Strategic Plan of MPWH for Years 2015 to 2019*. Jakarta. MPWH Regulation No. 13.1/PRT/M/2015.

<sup>14</sup> The line ministries include the ministries of public works and housing, transportation, agriculture, and energy and mineral resources. In 2015, the budget of the ministry of public works and housing increased by 40% compared to 2014 budget.

<sup>15</sup> Presidential Instruction No. 1/2015; Minister of Public Works and Housing Instruction No. 3/2015; Minister of Finance Circular No. S-577/2015; Minister of Finance Regulation No. 238/2015; Presidential Decree No. 20/2015.

<sup>16</sup> Regulation no. 19/PRT/M/2015 (on procurement and standards of design-and-build contracts), and Regulation no. 05/PRT/M/2015 (on sustainable construction of infrastructure).

### 3. Asian Development Bank Sector Experience and Assistance Program

11. The Asian Development Bank (ADB) has a long track record of supporting the MPWH's public investment projects. ADB has also supported preparation of public-private partnership infrastructure projects by setting up a project development facility at the Ministry of National Development Planning.<sup>17</sup> ADB has also actively supported the strengthening of the public procurement legal and implementation frameworks to boost transparency and efficiency in government spending for goods, works, and services.<sup>18</sup> Most recently, ADB has been supporting (i) the National Development Planning Agency in alignment of ADB and government safeguards and project preparation processes to reduce start-up delays, and (ii) the MPWH in the design of institutional arrangements for improved project preparation.<sup>19</sup>

12. Major lessons learned in supporting project preparation in Indonesia include the following: (i) delayed project preparation may lead to economically viable projects not being realized, (ii) it is more efficient to provide project preparation support directly to implementing agencies, (iii) project preparation consultant selection needs to be fast while also ensuring the hiring of reputable consultants, (iv) support should also cover preparation of due diligence and compliance documents according to government requirements, and (v) the project preparation mechanism needs to be designed to be part of the overall strengthening of the implementing agency's public investment management systems.

13. **New approach to project preparation.** To ensure timely and quality completion of all required pre-civil works preparation activities and documentation for the MPWH's large investment program, it may be expedient to consolidate the budget for project preparation under an "umbrella" operation to secure sufficient funding over a longer period of time. At the same time, it will be important to ensure an expeditious consultant selection process that results in engagement of high-quality national and international consultants. The following two-phase approach for consultant selection may be considered: (i) project preparation consulting firms will be selected to be part of a panel, and will be retained for up to 3 years on a noncommittal basis under indefinite delivery contracts; and (ii) for preparation of individual projects, selection will be made from the panel based on the evaluation of technical and financial proposals submitted by the consultants. Use of ADB consultant selection guidelines may help address issues that constrain the interest of strong international and domestic consulting firms in engaging with the MPWH for preparation of its infrastructure projects. ADB experience in the Philippines suggests that the two-phase approach is highly efficient, as the time to recruit consultants for project preparation is halved compared to the standard consultant selection process. If successful, this approach may be replicated on a larger scale by the MPWH or by other government agencies. In parallel to supporting project delivery, the MPWH's public investment management needs to be strengthened to improve infrastructure planning and delivery systems, including in master planning, project preparation and designs, multiyear contracts, environmental and social safeguards, and construction supervision.

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<sup>17</sup> ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Program Cluster, Loans, Technical Assistance Grant, and Administration of Grant from the Government of the Netherlands to the Republic of Indonesia for the Infrastructure Reform Sector Development Program*. Manila.

<sup>18</sup> ADB. 2011. *Technical Assistance to the Republic of Indonesia for Strengthening National Public Procurement Processes*. Manila.

<sup>19</sup> ADB. 2013. *Technical Assistance to the Republic of Indonesia for Aligning Asian Development Bank and Country Systems for Improved Project Performance*. Manila; ADB. 2011. *Technical Assistance to the Republic of Indonesia for Water Resources and River Basin Management*. Manila.

### Problem Tree for Multisector

