Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)
BASIC INFORMATION

Proposed Development

A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Project ID</th>
<th>Project Name</th>
<th>Parent Project ID (if any)</th>
</tr>
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<tbody>
<tr>
<td>INDONESIA</td>
<td>P157245</td>
<td>Improvement of Solid Waste Management to Support Regional and Metropolitan Cities</td>
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<table>
<thead>
<tr>
<th>Region</th>
<th>Estimated Appraisal Date</th>
<th>Estimated Board Date</th>
<th>Practice Area (Lead)</th>
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<td>EAST ASIA PACIFIC</td>
<td>Feb 2018</td>
<td>March 2018</td>
<td>Environment and Natural Resource</td>
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<tr>
<th>Lending Instrument</th>
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<th>Implementing Agency</th>
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<tr>
<td>Investment Project Financing</td>
<td>Ministry of Finance</td>
<td>Ministry of Public Work and Housing, Directorate General of Human Settlement (DG Cipta Karya)</td>
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Objective(s)

The Project Development Objective (PDO) is to improve solid waste management services for urban populations in selected cities across Indonesia

Components

Component 1: Institutional and Policy Development

Component 2: Integrated Planning Support and Capacity Building for Local Government and Communities

Component 3: Solid Waste Infrastructure in Selected Cities

Component 4: Implementation Support and Technical Assistance

Financing (in USD Million)

<table>
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<tr>
<th>Financing Source</th>
<th>Amount</th>
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<td>International Bank for Reconstruction and Development</td>
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<td>Bilateral Agencies (unidentified)</td>
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<td><strong>Total</strong></td>
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Environmental Assessment Category
A-Full Assessment

Have the Safeguards oversight and clearance functions been transferred to the Practice Manager? (Will not be disclosed)

NO

Decision
Track II - The review did authorize the preparation to continue

B. Introduction and Context

Country Context

1. Indonesia is the fourth most populous country in the world and the tenth largest economy in terms of purchasing power parity. It is undergoing a process of rapid urbanization that will be one of the key drivers that shape its economic prospects and will also put heavy pressure on the provision of basic services and infrastructure. From 2000 to 2010, the urban population increased at an annual pace of about 3%. In 2016, the urban population reached about 142 million people or 55% of the total population. Almost 4 million people are added to urban populations every year and by 2025 about 68% of Indonesians will live in urban areas. Currently, around 10 million poor people live in urban areas (representing 36% of the Indonesian poor). However, the proportion of urban to rural poor is growing, with the number of urban poor projected to overtake the rural in absolute numbers by 2030. While urban poverty has declined from 15% (2002) to 10% (2010), increasing urbanization will result in increasingly absolute numbers of urban poor. Therefore, the urban poor represent an increasingly important target population for poverty reduction policies.

2. Despite their importance in future economic development, urban areas have suffered from an “infrastructure gap” with severe under-investment overall and an under-developed role of the private sector. Infrastructure gaps are hardly restricted to the solid waste management sector. For example, according to World Bank estimates only a mere 1% of urban dwellers are served by sewerage systems, with only 12 cities having a substantial sewerage system. Furthermore, although infrastructure spending is currently low, where the amount of infrastructure investment has been increased, improvements in outputs and outcomes have been disappointing. This has been attributed to a combination of poor regulations, vested interests, and governance issues, especially around land administration and spatial planning.

3. Solid waste management is increasingly being viewed as critical for the rapidly developing Indonesian economy, not in the least as it also relates to tourism. The Government, in the National

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1 World Bank (2013): Urban Poverty and Program Review, Policy Note
Medium-Term Development Plan (RPJMN) 2015-2019 and through President Joko Widodo’s public addresses, has set a number of objectives to increase the role of tourism in the Indonesian economy. However, promotion alone without policy reform and targeted infrastructure investments for multiple destinations, can overwhelm established destinations (e.g. Bali), erode natural and cultural resources, and spoil the Indonesian “brand”. In fact, Coordinating Minister for Marine Affairs Luhut Panjaitan stated, “increasing plastic waste threatens to ruin Indonesia’s tourism sector”\(^2\). Unfortunately, solid waste management infrastructure has not yet been planned at the scale needed to address existing aesthetically displeasing conditions or to support future tourism expansion.

4. For the broader population, inadequate solid waste management brings a plethora of other deleterious impacts to the country’s economic growth. When urban solid waste is not collected, it is often openly burned, informally buried, or disposed in streets, canals, rivers, and parks. Solid waste burning can be a significant and costly source of air pollution in urban areas. Waste burning contributes to respiratory infections for urban residents resulting in significant health damages and lost working days. In addition, uncollected waste in municipal areas leads to the promotion of pests and diseases, lower property values and decreases the city’s attractiveness to outside investments. Poor and vulnerable populations are the most likely to suffer from inadequate sanitation due to uncollected waste, which can be a heavy financial burden through health-related expenditures and lost productivity.

5. When uncollected waste enters into drainage and sewer systems, it can also cause blockages and eventually urban flooding. To avoid flooding, dredging of garbage from drainage canals is a significant cost for many coastal cities. Even if local flooding events are avoided, the ultimate destination for most of this waste is the ocean. In the ocean, 95% of plastic waste is eventually disintegrated into visually unrecognizable forms and appears no longer a problem. However, plastic particles persist in the environment for hundreds of years and seem to be readily absorbed by marine life. With an estimated 8 million tonnes of plastic entering the ocean annually\(^3\), this poses a risk to the entire global fishing industry and human health, with Indonesia likely the world’s second largest contributor behind China.

6. For the solid waste that is actually collected by formal systems, the consequences of widespread open dumping and controlled landfills have been well demonstrated in recent years. Most dramatically, Bandung’s landfill became infamous globally in 2005 when the second worst ever “waste avalanche” buried 71 nearby houses and killed 143 people. Less dramatically, but more widespread, local news regularly report landfill fires and explosions that expose local residents to harmful airborne carcinogens and particulate matter pollution. There are many examples of landfills or open dumping sites polluting groundwater used for residential water supply, as well as surface waters. Furthermore, there are tens of thousands of “waste pickers” on landfills across Indonesia working in very hazardous, sometimes fatal conditions (estimated 6,000 waste pickers just at the Bantar Gabang landfill servicing Jakarta). Joining waste-pickers on most landfills are a multitude of cows, goats, pigs, and chickens –often sold for human consumption.

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\(^2\) Tempo. Plastic Waste Threatens Indonesian Tourism Industry, says Minister. February 23, 2017

7. Concerns about Indonesia’s solid waste management are increasingly high on the national agenda and subsequently Indonesian governments have made a myriad of ambitious commitments to improve performance. This is exemplified in the RPJMN 2015-2019 “100-0-100” targets of eliminating all slums and providing universal access to water and sanitation (including solid waste collection) by 2019. In addition, the government has pledged to reduce plastic and other marine waste by 70% by 2025, which is strongly linked to overall 100% urban collection targets on land. The National Waste Management Policy and Strategy (Jakstranas) drafted by the Ministry of Environment and Forestry (MoEF) also proposes a target of 30% waste reduction and recycling by 2025. Solid waste management is included as the third most important sector in Indonesia’s Nationally Determined Contribution (INDC) prepared for the 2015 Paris Climate Change Conference (COP 21). In addition, according to the Waste Management Law 2008, all opening-dumping sites should already have been closed by 2013 and all large cities should exclusively be sending their waste to sanitary disposal facilities. If Indonesia were able to achieve any of these commitments, it would be exemplary considering its current wealth, population, and geography.

8. Unfortunately, all of these targets appear distant from realization at the present time. It is roughly estimated that only 60% of Indonesia’s 142 million urban residents have access to waste collection services and only 55% of urban solid waste is handled at a transfer station or processing facility. Recent data suggests that approximately 105,000 tons of municipal solid waste is generated daily in Indonesian urban areas and quantities continue to rapidly increase with an expected 150,000 tonnes of waste produced daily by 2025 (45% increase over 12 years). Hence, not only does Indonesia need to increase collection to include roughly 40% of existing urban households currently with no service access, but will also need to contend with the annual increase of about 4,000 tons of solid waste produced every year due to increasing urban populations and rates of waste generation. There seems to have little improvement in collection rates over more than a decade.

9. Other aspects of Indonesian solid waste management do not perform any better. According to the Ministry of Environment’s 2014 analysis, 57% of metropolitan city landfills (TPAs) are predominately considered “controlled” with the remaining 43% of landfills considered “open dumping” sites (none are “sanitary” as mandated by law). Across all other city sizes, open dumping is still the normal paradigm despite its illegality. Open dumping is reported for 86% of large cities, 70% of medium cities, and 88% of small cities. In reality, almost 100% of waste in Indonesia ends up in non-sanitary facilities. To make matters even more difficult, the search for any new disposal sites is becoming increasingly problematic due to land shortages within suitable distances from large urban centers, particularly in Java. If Indonesia is successful in increasing collection rates, this will exacerbate an already dire need for new disposal sites, as the majority of cities will require new landfill investments by 2025 regardless of whether Indonesia achieves its waste reduction and recycling targets.

10. As can be expected, waste reduction and recycling also is not performing anywhere close to

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4 The “100-0-100” target refers to 100% household access to water supply; zero slums; and 100% household access to sanitation (including waste water treatment and solid waste collection).
6 According to World Bank analysis (2017), 67% of cities and districts do not currently have the land required to dispose of their waste until 2025 (68 out of 104 largest cities and urban districts)
government targets, and receives even less financial support than collection or disposal activities. At present, almost all future investment and operating funds are still directed towards basic collection, transfer and disposal activities. The only recycling scheme supported by the government that has any data is the MOEF Waste Bank initiative, which encourages communities’ to segregate and/or collect their household recyclables in return for credits that can eventually be transferred into cash and other services. In the well-known case in Malang, recycling deposits are exchanged for medical vouchers. In Bali, recyclables are exchanged for English lessons and extra-curricular youth activities. In total, however, this type of waste recycling at source achieves modest results, with around 4,000 Waste Banks capturing only 1.37% of total waste generated. There are also TPS-3Rs (very basic structures where waste workers can manually sort through mixed waste recovering recyclables) supported by Ministry of Public Works and Housings (MPWH). However, there have been approximately 1,000 TPS-3Rs constructed nationally by 2016 and it’s estimated that 90% are not operating.

11. Following decentralization reforms in the early 2000s, city and district governments were transferred the institutional responsibility for solid waste collection, transport, recycling, and disposal. All provincial, district, and city governments issue their own laws (perda) and regulations (perkada) concerning solid waste management, which are not always consistent with national laws and targets. The BAPPEDA (municipal planning agency) and Dinas Lingkungan Hidup (DLH) (environmental services unit) are the key local government agencies responsible for the planning and implementation of solid waste management. The DLH is responsible for the transportation of waste from intermediate collection points (TPS) to the landfill and management of the landfill itself, with primary collections at the household level operated quasi-independently by community organizations (RT/RW). The community organizations are then responsible for designing household collection systems and charging fees to fund operations, which results in a wide variety of approaches to worker organization, frequency of collection, disposal patterns, and payment structures. Regardless of the local organization of waste management, there is almost always no reliable waste or financial accounting conducted.

12. Despite not being the primary implementers, the national government’s advisory and regulatory roles of sub-national governments are critical to realizing improved sector performance. The MPWH’s role is generally limited to providing technical advice, promoting pilot projects, and supervising large-scale off-site solid waste facilities. The MOEF also has an important responsibility for developing policies, formulating regulations, and coordinating efforts in pollution control. Other ministries also have influential roles: Bappenas (national development planning), Home Affairs (sub-national government affairs), Health (community awareness raising), Finance (investment budgeting), Energy and Mineral Resources (waste-to-energy), and Coordinating Ministries (Economy; Human Development and Culture; and Maritime Affairs). This regulatory role is extremely vital when considering how much performance currently varies between certain cities. Some cities report 100% waste collection rates (e.g. Central Jakarta, Surabaya, Surakarta, Banda Aceh), but in sharp contrast, other urban areas will openly report collection rates below 30% (e.g. Pontianak, Tangerang Selatan, Gresik Regency, Palopo) – seemingly unconcerned with any consequences.

13. Funds allocated by local governments generally have been critically insufficient for both investment and operational costs. Operations are heavily subsidized from local budgets, with no relationship between cost levels and revenues (e.g. tariffs). The tariff system itself is too complex and often cumbersomely split between collection and transport/disposal. On average cities allocate 2.5% of their municipal budgets to solid waste management, whereas a substantially higher budget of up to 5-10%
is normally required to provide adequate services. Always reluctant to raise service charges, local
governments recognize that the investments and properly priced charges for operational costs will involve
a very high tariff compared with present arrangements (currently 40% of O&M costs are recovered, this
figures varies largely across cities in Indonesia). Local governments are always concerned about the
unpopularity of raising fees before the improved quality of the service has been demonstrated. At the
same time, it is not sustainable to continue the current situation of heavy subsidies, lack of suitable
investment capital, poor revenue generation and expect improved performance in the future.

14. However, even when a local government is allocating operational financing to waste management
systems that would be considered sufficient by international standards, sector outcomes are almost always
lacking because of the severe deficit in infrastructure investments and technical capacity. Furthermore,
the private sector is keen to partner with public institutions to address operational challenges, but a lack of
confidence in the areas of public governance, operational finance, and management capacity are
significant barriers for a broader and deeper involvement by the private sector. As a result, much needed
private capital inflows for investments in the sector are also not currently available.

15. Given the severity of the challenge, Bappenas, MPWH, MoEF and other ministries are keen to
support local governments and spur investments in the sector. However, in order to reach the RPJMN’s
goal of 100% sanitation coverage, MPWH estimates that new investments of approximately US$5 billion
will be needed in the solid waste sector over the next four years. With around US$1.0 billion predicted to
be available from the national government over coming years (including funding from international
development agencies) and only limited additional financing available from local governments, there are
considerable investment financing gaps to achieve policy targets.

16. The proposed World Bank supported national solid waste management program would
complement the comprehensive set of urban infrastructure programs prepared to assist Indonesia. Along
with the National Slum Upgrading Program (NSUP), National Urban Water Supply Program (NUWSP),
the National Affordable Housing Program (NAHP), National Urban Wastewater Program (NUWP), and
the Indonesian Regional Infrastructure Development Fund (RIDF), this proposed program is part of a
well-aligned World Bank support commitment to assist Indonesian efforts to eliminate slums and provide
universal access to safe water and sanitation. In addition, the rich Advisory and Analytical Services
portfolio in Indonesia further strengthens the institutional capacity building components of this program.
The programmatic approach for national solid waste sector development also involves the existing donor
initiatives in this sector, particularly the KfW Development Bank’s Emission Reduction in Cities (ERIC)
Project.

17. There is a strong rationale for World Bank involvement in this sector. The World Bank’s
involvement will enable the Government of Indonesia to benefit from: (a) technical expertise and global
knowledge on solid waste collection, sanitary disposal, waste reduction, recycling, and advanced
technologies (e.g. including incineration, landfill gas capture, anaerobic digestion, production of refuse-
derived fuel); (b) effective, proven mechanisms to facilitate high-quality management and oversight of
large programs, including program supervision, results monitoring, and evaluation through continued
working relationships with MPWH; (c) innovative approaches tailored to the highest priorities of national
and each sub-national governments; (d) strong governance controls and fiduciary oversight mechanisms
in the Indonesian context; and (e) capacity building for national, provincial, and local governments to
plan for and implement effective city/district wide waste management services.
C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

The Project Development Objective (PDO) is to improve solid waste management services for urban populations in selected cities across Indonesia.

Key Results

18. Achievement of the PDO will be measured by the following indicators:

   a) Proportion of population in selected urban areas with regular household waste collection
      [percentage of total population in participating cities and districts with regular waste collection
      services];

   b) Landfill disposal capacity operational per defined criteria [disposal capacity in m³ of sanitary
      landfills, including underground protection lining systems; leachate collection/treatment;
      preparedness for landfill gas capture; compaction and regular coverage of freshly disposed waste;
      management regime for waste workers and separation of fruit/vegetable waste for community
      livestock];

   c) Solid waste recycled, composted and/or treated with other techniques to reduce waste disposal
      volumes [weight percentage of total generated waste from selected populations reduced, or
      converted to recycled materials];

   d) Proportion of targeted beneficiaries with rating ‘Satisfactory’ or above on program interventions
      (disaggregated by gender) [percentage of beneficiaries as population].

Intermediate indicators are still being designed and refined at this stage, but it is expected to include indicators concerning:

   a) Financial sustainability/operational management in selected cities/districts, [O&M allocation
      under municipal budgets as percentage of estimated sustainable funding needs / percentage O&M
      covered by tariffs and user fees];

   b) Marine plastic waste from land-based sources from selected urban populations;

   c) Cities with improved livability, sustainability, and/or management;

   d) Number of cities with high-quality solid waste management implementation plans.

D. Project Description

Project Components
19. The program will create a nation-wide, scalable platform for improving solid waste management performance that is adaptable for a variety of different urban contexts in Indonesia. The program will comprehensively support solid waste management policy and legislation, financial sustainability, and stakeholder collaboration across all aspects of the sector (collection, treatment, disposal, recycling and waste generation). The program is designed to support the implementation of existing sectoral programs, including MPWH’s Acceleration of Urban Sanitation Development Program (*Percepatan Pembangunan Sanitasi Permukiman*) (PPSP) and MoEF’s Solid Waste Management Roadmap to 2025.

20. Although the proposed program only represents roughly 20% (US$1.1 billion) of the overall sector investment needs over the six-year period of program implementation, it is of large enough scale to deliver improved sector performance measurable at a national scale and provide a strong foundation for future expansion. Relative to overall program costs, the World Bank delivers a modest amount of financing. However, the World Bank’s value added proposition in this program is to strengthen the outcomes of existing government funding in solid waste management through technical expertise, global knowledge, and strong governance controls for the Indonesian context. The program is based on implementation mechanisms proven in other Indonesian urban infrastructure projects to facilitate high quality management and oversight of the program, including results monitoring and evaluation.

21. The PDO will be achieved through the implementation of the following program components.

22. **Component 1: Institutional and Policy Development (US$5 million Total Budget; US$3 million IBRD).** This component will support institutional strengthening and capacity building of central government agencies responsible for various technical and administrative aspects of solid waste management services (e.g. MoEF, MPWH, Bappenas, Ministry of Home Affairs (MoHA), Ministry of Energy and Mineral Resources (MEMR)). This component focuses work around three strategic priorities: (a) strengthening the regulatory framework, sector monitoring, and regulatory oversight; (b) policy development related to waste reduction and marine litter management; and (c) institutional capacity building.

23. Strategic studies will focus on key impediments to enhancing the solid waste sector’s overall performance. Identified studies for program implementation: (a) household waste reduction support (including 3Rs (reduce, reuse, recycle) and “Waste Bank”\(^7\)); (b) mechanisms for incorporating the informal waste workers and wider communities in formal waste collection and recycling systems; (c) a roadmap for transitioning *Dinas Kebersihan* to BLUD\(^8\) institutions; (d) policy and legal frameworks for promoting waste-to-energy investments; (e) strategies for leveraging additional private and public financing for solid waste management; and (f) development of policy measures to reduce land-based marine pollution.

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\(^7\) A results-based financing scheme used to improve source separation and collection of waste through changes in behavior at the household level.

\(^8\) BLUD is defined as a regional government public service agency that is statutorily defined (UU No.28/2009) to fulfill certain administrative, financial, and substantive criteria. This type of institution provides a more suitable basis for semi-commercial service operations; capable of delivering better service with greater accountability.
24. **Component 2: Integrated Planning Support and Capacity Building for Local Government and Communities (US$56 million Total Budget; US$39 million IBRD).** Cities that meet certain readiness criteria and demonstrate commitment to improve waste management operations (see Annex 1 for details) are eligible for technical support under Component 2. This component will finance the costs of experts and community facilitators throughout the program cycle to support capacity building (including longer-term management support, training, workshops, and knowledge exchange events between cities as well as urban sub-districts) of local governments and communities to design and manage solid waste service improvements (approximately 45 cities to be supported). This component addresses one of the primary constraints to improving sector performance: the technical and organizational capacity of local governments to efficiently operate complex and costly solid waste operations. Advisory services for designing local government regulations and tariffs will also be provided to local governments. In addition, funds in this component can also be used for public awareness campaigns for waste minimization and proper disposal of their waste, which is also a high government priority. It will be especially important to target women in this, as they tend to have initial control over the generation and reuse of wastes at the household level.

25. Currently, almost all cities have prepared City Sanitation Strategies (SSKs) that outline a five-year strategy for citywide solid waste management service improvements, required investments, and potential financing sources. For the participating cities under the program, this component will provide support for improving the design of these strategies and prepare masterplans that include practical and achievable roadmaps with financing schemes and institutional strengthening to support their implementation. Special attention will be paid to community-based improvements in waste collection and gender issues within the waste value chain. In Indonesia, the most common approach is that city communities (neighborhoods) organize primary waste collection. The city government organizes waste transport from a limited number of collection points (TPSs) to disposal sites or (in some cases) intermediate recycling stations. On the one hand, a lot of waste is already ‘leaking’ at the community level, never entering the formal waste management system. On the other hand, the community level has a lot of untapped potential to improve waste recycling through waste separation. Models will be developed, tested and implemented to improve waste collection rates and waste recycling at the community level and integrate community level collection into the waste management chain, both institutionally and functionally. These models will also aim to find a good balance between incentives to support communities and improvements in regulatory oversight moving to universal waste collection coverage.

26. This component will also provide technical assistance to cities for developing feasibility studies and detailed engineering designs for priority investments. Technical assistance provided in this component will complement, but not be limited to all cities selected for physical infrastructure investments provided in Component 3.

27. This component will also support cities to engage the private sector in waste management operations and investments at two levels. Firstly, the capacity building activities should develop adequate competencies in strategic planning, operational finance, regulatory oversight and contract management. These are all essential prerequisites for private sector engagement. In parallel with developing these competencies, under the master-planning supported by Component 2, specific attention will be paid to private sector engagement in waste management services. Secondly, transactions advisory services for waste incineration (waste-to-energy) investments will also be made available to a select group of around six cities to assist in the structuring of sub-project documents, including procurement and contract
documents, and environmental standards to ensure public benefits from these private sector investments are maximized. Climate change planning considerations, both mitigation (institutional strengthening to acquire carbon finance) and adaptation (climate vulnerability analysis) will also be supported through this component.

28. **Component 3: Solid Waste Infrastructure in Selected Cities (US$1,016 million Total Budget; US$45 million IBRD).** The immense challenges and shortages of financing necessitated a process to prioritize resources to the most impactful interventions. From the very beginning, there was strong consensus amongst government leaders that the program should be structured to focus resources on cities that possess the most promise to implement waste management systems that can be a role model for all other Indonesian cities. Accordingly, the program preparation has completed a comprehensive evaluation of all cities and urban districts with populations over 100,000 people to identify the top performers where national resources would be focused. These cities were then divided into three tiers depending on their current performance and commitment to solid waste management (see Annex 1 for further details).

29. Every city or urban district receiving investment financing through Component 3, will also be supported with the required technical assistance package through Component 2 but additional requirements apply for cities to become eligible for investments under Component 3 (see Annex 1). This is a key aspect of increasingly the quality and sustainability of investments made through the program, and has been proven effective in other large Indonesian infrastructure programs assisted by the World Bank.

30. **Sub-Component 3.1: Support for Integrated Solid Waste Management Systems for High Capacity (“Tier 1”) Cities.** This component will provide investment financing for a select group of cities (currently projected as 14 cities/districts) that have demonstrated sufficient capacity including operational budgets and commitment in solid waste management to justify large investments in complex systems and advanced treatment technologies. Cities selected under this component will receive support for investing in all needed infrastructure aspects of solid waste management not currently in place, including collection, transfer, treatment, disposal, and waste recycling/composting. This component would include financing for advanced treatment technologies, such as mechanical-biological treatment of mixed waste and refuse-derived fuel production. This sub-component is envisioned to facilitate the creation of model cities for solid waste management cities that can act as both inspirations and performance benchmarks for all other cities and districts in Indonesia.

31. **Sub-Component 3.2: Support for Solid Waste Management Systems in Lower Capacity Cities.** This component will provide an investment financing mechanism for a short-listed group of cities (currently project to be 28 cities/districts) to be selected for smaller and partial investments to improve their collection, treatment, and disposal of solid waste. For Indonesia to reach its 100% sanitation goal it will be necessary to also support cities that still face problems in adequately managing waste collection and disposal services, and to provide sufficient financing to improve these operations. Many of those cities may not yet be capable of managing large and costly sanitary landfill sites or treatment facilities, but their capacity could substantially benefit from the provision of limited investments to existing infrastructure and at existing sites. These investment options could include: investments to improve operations at existing waste disposal sites (such as improvements in waste reception and disposal logistics, leachate collection and treatment, landfill gas capture), construction of waste transfer stations,
collection equipment, sanitary closure and environmental rehabilitation of old dumping sites, and investments in waste sorting and segregated waste collection.

32. **Component 4: Implementation Support and Technical Assistance (US$15 million; US$13 million IBRD)**. This component will provide technical support, advisory services and training of 3 Program Management Units (PMUs) at the national level (MPWH, MOEF, and MOHA), and for Program Implementation Units (PIUs) at provincial and city levels. Considering the technical complexity of solid waste management systems and the broad geographic scope (approximately 45 cities/district governments in different provinces) a series of strong management and monitoring bodies will be essential for the program’s success.

33. Therefore, this component will provide a strong package of support for strengthening implementation and management capacity by funding monitoring and evaluation, enhancing stakeholder’s collaboration at all levels, and training to make substantial use of participatory and inclusive techniques for community engagement. Costs of national management consultants and oversight service providers will be financed under this component.

34. In addition to implementation progress of participating cities in Component 2 and 3 of the program, under Component 4 all 100 cities and districts (Tier 1-2-3) with a population of more than 100,000 will be regularly reviewed to assess overall performance in waste management and classification in the three-tier system. This work will be part of a larger activity under the program to create a platform and hold regular events that will reach out to all 100 cities, and create frequent opportunities for policy dialogue, discussions on system improvement models, peer-to-peer exchange of experiences, and dissemination of results from the program. These outreach activities will require specialized staff in the CPIUs of the program.
E. Implementation
Institutional and Implementation Arrangements

35. The Development Steering Committee for Housing, Settlements, Water Supply and Sanitation (Tim Pengarah Pembangunan Perumahan, Permukiman, Air Minum dan Sanitasi Nasional) will act as the program’s Steering Committee (SC) at the central level. This Steering Committee is chaired by Bappenas with participation of Echelon-1 staff from other ministries, including: the KEMENKO, MPWH, MOH, MOEF, MOHA and MOF. The SC will be responsible for the program coordination at central level as well as discuss and resolve issues which requires inter-ministerial decisions, support policy development, and monitor the achievement of national development priorities on relevant supported sectors.

36. The MPWH (Director General for Human Settlements (DGHS)) will be the executing agency and will lead the Central Program Management Unit (CPMU), also consisting of representatives from other implementing agencies. The CPMU will be led by an Echelon-3 staff and be supported by technical, financial and administrative staff from the DGHS. The CPMU will establish procurement, financial management and safeguards that will conform to the World Bank’s policies and guidelines. CPMU will perform the following responsibilities: overall management of the program for achieving the project objective and key performance indicators (KPIs); ensure the quality of project planning, implementation and outputs both at central and local levels; carrying out timely supervision, monitoring and evaluation; facilitating cities or provinces to have sustainable solid waste services; and providing inputs to the Steering Committee for policy developments and inter-ministerial or inter-sectorial issues.

37. The Central Program Implementation Unit (CPIU) will be composed of three program implementation units lead by Echelon-3 staff: (i) Directorate for Waste Management (DWM) in MOEF; (ii) the Directorate SUPD II in MOHA; (iii) the Directorate Development for Environmental Sanitation (DES) in MPWH; and the Ministry of Health (MOH). CPIU responsibilities per component are:
   a) Component 1: MOEF and MOHA;
   b) Component 2: MPWH;
   c) Component 3: MPWH and MOEF;
   d) Component 4: MPWH and MOHA.

CPIUs will perform the following tasks: timely execution of selected activities; establishing sound procurement, contract management and financial administration; and carrying out supervision and monitoring. CPIUs will report to CPMU.

38. A Working Group of Water Supply and Sanitation (Kelompok Kerja Bidang Air Minum dan Penyehatan Lingkungan) or a committee with similar function will support the coordination at the provincial and local levels of government. When project activities in the local government are to be executed using the on-granting mechanism (hibah), these sub-national committees will coordinate the implementation of project-related policies, collaboration across institutions, and preparing recommendations to the Provincial or City Heads (Governor or Bupati) and local parliament (DPRD) to submit program-funding proposals to the CPMU to be supported through an on-granting mechanism.

39. A Program Implementing Unit (PIU) will be established at every selected province and city/district, and will perform the tasks similar to CPIUs. Provincial PIUs will only be established for provinces with regional subproject investments (e.g. regional landfills involving multiple cities and/or districts). City and District PIUs will be established in each participating city and district. Heads of each PIU will be the Public Work (Pekerjaan Umum/PU) or the Housing and Settlements Agencies (or Dinas Perumahan dan Kawasan Permukiman/PKP), with a representative from
the Environmental Unit (or *Dinas Lingkungan Hidup/LH*) as its members. Both Provincial and City PIUs will report to CPMU.

40. The budgeting system for the program will follow existing government procedures that are well defined. The IBRD financing will be included in the annual government budget and line ministry budget document (DIPA). Contracts will be divided by whether it is financed by the loan (IBRD) or counterpart funds (APBN or APBD) in order to reduce risks. The loan funds are going to be executed under the central government budget to be implemented by MPWH, MOEF, and MOHA. Activities at the local level will be executed by MPWH work units in the province (MPWH Provincial *Satker*). At this stage, the possibility of using on-granting (*hibah*) mechanisms for some IBRD-financed Component 3 activities at the local government level for a later stage of the program is still open.

41. In the first two years of program implementation, investments will be constructed using existing central government processes. However, starting by the third year of Component 3 implementation, Government-financed investments (APBN-*Murni*) will utilize on-granting mechanisms (*hibah*) whereby the central government transfers funds directly to the local governments. When on-granting mechanisms are utilized the local government level will be responsible for contracting and supervision of investment construction as opposed to the current business-as-usual approach where the national government completes all contracting and construction, and transferring the asset to the local government after completion. This will be the first time these financing arrangements have been programmatically utilized for large-investments and the program will require the first year or two of implementation to finalize operational procedures.

42. The *Satker* of DES has carried out similar construction in the past and has the capacity to implement safeguard instruments. However, when on-granting mechanism is used, the environmental and social impact management will be the responsibility of the *Dinas Lingkungan Hidup* (DLH) in the cities/districts, and their capacities in environmental and social safeguards will need to be strengthened. In order to address capacity issues, technical assistance in the form of a capacity building program for staff of DLH will be provided as part of Component 2 for the cities/districts involved in the project.

**F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)**

43. **Project Location**: The program is nationwide, with specific investments in metropolitan areas and their satellite cities as defined by the RPJMN 2005-2025. All metropolitan areas (population over 1 million) will be the primary targets of this program. Hence, possible cities for inclusion in the program include (but are not limited to) cities such as: Bandung, Banjarmasin, Bogor, Denpasar, Depok, Jakarta, Madiun, Makassar, Manado, Mataram, Medan, Padang, Palembang, Semarang, and Surabaya. It is expected that up to 50 cities will receive technical capacity support (Component 2). Of those 50 cities, a maximum of 4 cities will construct large and complex physical investments with advanced treatment technologies, while 20 to 30 cities will receive funds for smaller and simpler investments to improve performance (Component 3). Two specific investments in two cities for the first year of project implementation under Component 3 have been identified during project preparation; specific instruments (i.e. ESIA and ESMP) have been prepared for Makassar and Padang City.

44. **Salient Physical Characteristics Relevant to Safeguards Analysis**: Investments under Component 3 include re-engineering works at existing landfills that might require additional sanitary cells, construction of new landfills, construction of new leachate treatment facilities, construction of intermediate waste treatment facilities (e.g. material
recovery or sorting facilities), installation of landfill gas collection systems, sanitary closure and environmental rehabilitation, and possibly organic composting plants. This component may include financing for advanced treatment technologies, such as anaerobic digesters and refuse-derived fuel production (although it is not currently planned). Most of the sub-projects are expected to involve redesign and refurbishment of existing landfills, and will thus take place within the legal and physical footprint of the existing solid waste facilities (TPAs) in the selected areas. A small number may be implemented on land that has been acquired for the project purposes, but where resettlement is still being carried out by the local government. Economic displacement is the most consistent social impact across all sub-projects. While the changes in collection services are expected to accommodate local people who work in waste collection, and bring positive impacts at a broader community level, the project also poses potential risks and impacts to waste pickers and livestock owners during construction and operation. The changes in operation at the reformed or new landfills will have potential adverse economic effects on local community enterprises and livelihoods of waste pickers and livestock owners.

G. Environmental and Social Safeguards Specialists on the Team

- Kian Siong (Environmental Specialist) GEN2A
- Lucy Madeline Mitchell (Sr. Social Specialist) GSUID
### SAFEGUARD POLICIES THAT APPLY

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<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
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| Environmental Assessment OP/BP 4.01       | Yes        | Considering the types of investments, scale, and environmental and social sensitivities, the project is classified as a Category A. The program covers the entire solid waste management chain from generation to final disposal/treatment. There are generally significant safeguard issues throughout solid waste management operations (collection, transfer, treatment, and disposal) in Indonesia. Cities and districts have a wide variation in the effectiveness of collection services, but substandard disposal sites and treatment practices are prevalent in virtually every scenario across the country. The poor design of the SWM systems and the lack of consistent environmental monitoring at disposal sites have resulted in groundwater, surface water and air pollution, odor generation and disease vector proliferation concerns at these sites. In addition, learning from various cities experiences, the following issues are commonly reported throughout the sector: (i) poor maintenance of dump trucks that are not covered and watertight, causing leachate leak with foul smell along the transportation corridor to landfill; (ii) Illegally dumping the waste outside dedicated dumping areas; (iii) Uncollected waste in temporary disposal site in residential neighborhoods that spills into roadways and creates sanitation and aesthetical problems. The proposed program will have the risk of adverse environmental impacts primarily arising during the construction, operation and maintenance of Component 3 investments. At construction stage such as, (i) upgrading existing sanitary landfills through rehabilitation of leachate treatment systems and waste treatment plants (e.g. mechanical biological treatment (MBT) facilities) and (ii) excavations of old waste and construction of new sanitary cells, including the installation of landfill...
gas collection. If not properly managed, these construction activities pose risk to air, land, and water (surface and ground) pollution as potentially harmful substances are moved around and released. This is an especially pertinent risk as most of these landfill sites have years of accumulated pollutants. At the operations and maintenance stages environmental risks will be even higher, if local capacity building is unsuccessful or local governments do not allocate the required operational funds for satisfactory environmental and social safeguard management.

The program will also generate diverse social and economic impacts, mostly localized in existing landfill areas, and potentially in areas to be developed as new landfills. The most significant impacts relate to waste-pickers, communities around the landfills including livestock owners, and recyclers that rely on the waste stream for their livelihood. There is potential for land acquisition, but unlikely resettlement, for expansion of facilities or development of new landfills.
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<th>Answer</th>
<th>Description</th>
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<tr>
<td>Natural Habitats</td>
<td>No</td>
<td>The program shall not fund any activities within natural habitats, wildlife reserves, protected areas or critical natural habitats and its buffer zones, therefore will not have any adverse impact on environmentally and socially sensitive areas. Nevertheless, improving the leachate treatment may have positive impact on the receiving water body; this will be confirmed during the preparation of the DEDs.</td>
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<tr>
<td>Forests</td>
<td>No</td>
<td>No program activities (i.e. civil work) will not be located in forests, in particular any protection or conservation forest areas nor critical habitats and buffer zones. The program will focus on rehabilitation of existing landfills or construction of new landfills that are within the city/district spatial planning (RTRW) areas designated for landfill facilities.</td>
</tr>
<tr>
<td>Pest Management</td>
<td>No</td>
<td>The program intervention will not procure or use any pesticides, and there is no need for chemical control of flies and vermin at the landfills and processing facilities.</td>
</tr>
<tr>
<td>Physical Cultural Resources</td>
<td>Yes</td>
<td>Finding physical cultural resources during the course of project activities is considered unlikely in areas where the focus is on existing landfill, however, considering that the Component 3 will also include the possibility of construction a new landfill, a chance find procedure has been included in the ESMF. Screening will be carried out at the earliest stage of sub-project preparation. Should any PCR be identified by chance at any stage of the project preparation or implementation, its handling will be safeguarded by a PCR Management Plan under the ESMF and/or in the AMDAL. The chance find procedure has been included in the ESMF.</td>
</tr>
<tr>
<td>Indigenous Peoples</td>
<td>Yes</td>
<td>Initial screening of IP will be carried out once the list of the potential cities/district becomes available. The first screening of the cities currently under consideration (i.e. Makassar and Padang) indicated that IP would not be present or impacted. Given that the urban context in this program, it may be possible that there will be no instances where IPs will be present in project areas once these are</td>
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identified, but that this cannot be ruled out at this point since investments have not been identified yet, including water bodies and ancillary facilities some of which may be in rural and sub-urban areas with a higher likelihood of IPs’ presence.

Possible developments related to IP in the program are the construction of temporary dumping sites and certain waste processing activities such as composting outside the city center, where IPs communities may be present. ESMF includes Indigenous People Planning Framework that will provide guidelines to deal with the IP, in terms of communications processes, livelihood and right to preserve their identity. A site-specific IPP will be prepared if or when IP are present.
Land acquisition will be necessary for some investments under Component 3. The feasibility of Padang and Makassar have not included the need for new land, however Padang City government has a plan to extend its landfill by 5 ha, the land is currently not occupied thus not physical displacement is foreseen. A program-wide LARPF has been prepared prior to project appraisal covering all components for sites that are unknown.

For Component 3, the program may include construction of new landfills (i.e. regional landfills), therefore land acquisition (10-20 ha) is likely. The MBT facilities which are one of the 3R activities and the development of a temporary dumping site, if proposed and located outside the landfill footprint, will require minor land acquisition of less than 200 m². Land Acquisition and Resettlement Policy Framework (LARPF) has been prepared to address this issue, it will serve as a guideline for the preparation of a Land Acquisition and Resettlement Plan (LARP) should any of the interventions under Component 3 result in land acquisition and physical displacement of the PAP and restriction of PAP livelihoods as per defined in OP 4.12. LARPs is prepared for any site where land acquisition will occur. Economic displacement relating primarily to waste pickers and livestock owners, as well as to other actors in the informal recycling sector, are addressed under 4.01.

<table>
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<tr>
<th>Involuntary Resettlement OP/BP 4.12</th>
<th>Yes</th>
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<tr>
<td>Safety of Dams OP/BP 4.37</td>
<td>No</td>
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<td>Projects on International Waterways OP/BP 7.50</td>
<td>No</td>
</tr>
<tr>
<td>Projects in Disputed Areas OP/BP 7.60</td>
<td>No</td>
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The project will not finance dams, nor the rehabilitation or any activities related to dam operation and safety. It will not depend on the operation of an existing dam.

The project will not affect the efficient utilization and protection of international waterways

The project will not finance any activities within territorially disputed areas.
KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The project has a Category A classification for Environmental Assessment (EA), because it involves civil works related to rehabilitation and re-engineering as well as further operation of solid waste treatment systems and facilities at existing landfills (Component 3), that could have significant impacts if not managed or monitored properly.

Main environmental issues at existing project sites (i.e. Padang and Makassar) include: (i) surface water pollution due to level of leachate treatment at the locations/landfills and treatment plant effluents that does not meet with the Indonesian wastewater discharge standards, causing pollution at the receiving waters body; (ii) possible groundwater pollution due to poor facilities’ design and inadequate/lack of equipment (aerators, insufficient filter capacity, leaking pipes that discharge near a stream at the landfill boundary rather than into the treatment works), improper solid waste and leachate containment (e.g., no liner and drainage system), having poor site protection and achieving limited treatment; and (iii) air pollution due to odor as landfills are open waste dumps and to lack of proper landfill gas management system, thus, enhancing GHGs generation during the decomposition of waste, which are released to the atmosphere, in addition, due to poor design of gas management, fire is not unusual during the dry season. Further, there are overall EHS concerns at the landfill, transfer stations and intermediate treatment facilities for operators, waste pickers and other citizens living in the vicinity, as there is lack of standard operating procedures for the entire SWM system and no public awareness on EHS aspects (e.g., workers or waste pickers are not on PPE or wearing minimum safety gear). The result of ESIA for Padang and Makassar has recommended the operator (i.e. DLH) to impose the use of PPE and for waste pickers, a better sorting facilities at the receiving waste point in the landfill will be constructed.

During project construction, short-term environmental impacts are likely to be localized, temporary, and readily mitigated by applying good international construction practice and planning during works: (i) traffic, exhaust emissions and noise generated by vehicles and landfill related equipment; (ii) improper disposal of construction related wastes; (iii) temporary pollution of air, soil, ground and surface water; and (iv) occupational noise and dust exposure of workers. In contrast to construction stage, during operation of the landfill and its associated facilities, the environmental impacts are long term and will need continuous mitigation measures to be applied, among the potential adverse impacts are (i) air emission and odor from waste collection & transport; waste receipt, unloading, processing & storage; MBT operation; and landfilling; (ii) littering due improper waste loading/unloading operation (iii) pollution of air, soil, ground and surface water; and (iv) occupational noise and dust exposure of workers. In terms of social issues, the ESIA for the Padang (Aie Dingin landfill) and Makassar City (Tamangapa landfill) show that the most adverse impact will be on socio-economic conditions of waste-pickers (approximately 150 in Padang and 400 in Makassar) and surrounding populations including waste buyers and livestock owners. Changes in access to the waste may result from new transport, sorting and treatment systems, affecting waste pickers and buyers’ income patterns and levels. Enforcement of restrictions on cattle in landfill areas will require changes in livestock management in some sites.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

Long term impacts such as odor generation and effects on air quality and noise emissions are expected during the operation phase of the newly constructed facilities. To avoid such impacts, the operator will be instructed to i) perform
regular soil covering as per sanitary landfill operation standard, ii) carry out monitoring of the facilities in accordance with a comprehensive monitoring system for supervision and control of air, water and soil quality. Possible indirect environmental effects could also arise from the solid waste treatment technology chosen e.g., anaerobic digester plant process (effects from compost utilization, excess biogas and wastewater leachate management) or RDF (effects from products and by-products/ emissions after co-incineration in cement kilns). Noting that application of these both technology is not in the plan yet.

Potential loss of livelihood of PAPs during the project construction and operation is a manageable impact, with the development of alternative livelihood strategies for affected stakeholders already initiated to ensure the PAPs (especially waste pickers) livelihoods are not adversely affected in the long term.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

The feasibility studies identified and evaluated several alternatives to the proposed investments, including the no action alternative; evaluation of RDF technology versus anaerobic digestion, thermal destruction (note that the Bank carried out a separated study to look at the feasibility of thermal technology in Indonesia). Feasibility of each alternative technology and its impacts are assessed as part of the ESIA documents. Consultation with the city governments on design alternatives and options for PAP livelihood management have been considered, including retraining, formalized employment of some waste pickers, and / or more regulated informal sector.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

Indonesia has a well-established EIA process that prepares AMDAL (consisting ANDAL (ESIA) and RKL/RPL (ESMP)) or UKL/UPL (Simplified AMDAL), which if done well would meet the requirements of the World Bank’s Operational Policy 4.01. Also, the AMDAL regulations and OP 4.01 (for Category A projects) have similar objectives for public consultations that requires at least two rounds in the process, at the time of scoping and TOR preparation, and at the end prior to approval. Given the existing landfill operation in the Padang and Makassar, documentation at the level of AMDAL has been already prepared and the RKL/RPL continues to be implemented. Nonetheless, to comply with the Indonesian and Bank Policy requirement, an ESIA plus ESMP incorporating the historical data of RKL/RPL implementation for the two cities were prepared, and additional two rounds of public consultation were completed for both Padang (Aie Dingin landfill) and for Makassar (Tamangapa landfill). The purpose of ESIA and ESMP is to mitigate the identified risks and to propose site-specific measures and monitoring programs. Note that only limited infrastructure changes will be financed by the project in line with the FS recommendations.

The ESMP provides site-specific measures to address the environmental impacts during construction and operation. Likewise, the ESIA finding on the social impacts showed the numbers of vulnerable waste pickers in the two sites are low and government willingness to prioritize them in social management plans has been established; these impacts and mitigation are addressed in ESMP. The ESMP is based on a 25% sample of waste pickers and waste buyers that was carried out to establish the baseline data and consultations included identification of skills and interest in alternative livelihood options. The landfill operators and local government are engaged with these stakeholders, but need encouragement and support to ensure the vulnerable people are prioritized and economic impacts are appropriately mitigated during program implementation. Livelihood issues require close follow-up during implementation, through the design process, efforts to integrate waste pickers into the new landfill regimes and to better regulate aspects of recycling may also lead to positive impacts on these groups. Other positive impacts include improved awareness, behavior change and health and sanitation benefits for communities with improved waste management services as well as those adjacent to the landfills. Women (including female headed households), elderly persons, youth and children are amongst the more vulnerable of the waste picker communities working at landfill sites in many parts of Indonesia.
While the waste pickers will have the opportunity for better working conditions as explained above, a key challenge – and where the Bank has limited prior experience - is with cattle roaming on the landfill. The cattle are owned by both waste pickers and the local community. From consultations with the cattle owners, the option to remove cattle from landfill was unsupported, construction of a stall feeding system is acceptable although this requires more effort from the owners to bring the green market waste to their cattle. Besides that the waste pickers will also be allowed to shepherd their cattle to a grazing zone, such closed landfill cells.

As for potential cities/districts that have not prepared any safeguard documents, the MPWH has prepared Environmental and Social Management Framework (ESMF) which includes as annexes a Land Acquisition and Resettlement Policy Framework (LARPF), Indigenous People Panning Framework (IPPF) and Physical Resource Cultural Chance Find Screening Procedure. The ESMF will serve as guideline for preparation of required safeguard documents. The ESMF includes a negative list of activities that cannot be financed by the project, and environmental and social screening for each proposed activity and identify specific instruments that need be prepared prior to civil works. Not only will the ESMF be applied to physical investments in Component 3, but it is integrated into the technical assistance of Components 1, 2, and 4 (following Interim Guidelines for Safeguards Policies in TA Activities), for such activities as the preparation of feasibility studies, engineering designs, and technical standards. Included in Component 2, funds are dedicated to the preparation of safeguard instruments (e.g. ESIA, LARP) as necessary for following the ESMF. Furthermore, Component 4 will include funds for program supervision and monitoring, which will include certain safeguard relevant aspects.

At national level, the Ministry of Public Works and Housing (MPWH) has been the World Bank’s primary client in infrastructure development projects for decades. During the 1990s, several urban development projects funded through IBRD included components for solid waste management and landfill construction (e.g., Yogyakarta, Semarang – Solo (SSUDP), Balikpapan (KUDP), Pontianak (KUDP)). The Directorate of Integrated Regional Infrastructure (formerly known as the Directorate of Program Development) under the Directorate General of Human Settlement (DGHS) has been the Bank’s main counterpart for all project preparation activities related to water and sanitation, water supply and housing (e.g. Pamsimas III, National Urban Slum Upgrading Program, and National Urban Water Supply Project). In implementation, the Directorate for Development Environmental Sanitation (DES) of MPWH will host the Central Project Management Unit (CPMU). The DES has its working unit (Satker) that serves a Central Project Implementation Unit (CPIU) and will be responsible to procure the civil works. The Satker have carried out similar work funded by donors and hence they have acquired sufficient knowledge, experience and adequate capacity to ensure that environmental and social safeguards are properly addressed during project preparation and implementation (construction stage).

At sub-national levels, the DLH (Environmental Agency) at city/district/province level will be Project Implementation Unit (PIU) and be responsible for operation of the SWM facilities (collection, transport and disposal). The capacity at the DLH requires strengthening through Components 2 and 4 that will provide technical assistance for the DLH to support not only the capacity to operate the landfill but also its responsibility for managing the entire solid waste management chain from generation to final disposal/treatment. Among the technical assistance activities is helping to setup real-time monitoring of solid waste volume, leachate treatment system operations, environmental monitoring (water, air and soil quality) for compliance with national standards as stipulated in the RKL/RPL, waste pickers livelihood monitoring system and grievance redress mechanism. In additional, for civil works, awarded contractors must prepare its detailed EHS and site specific ESMPs implementation plan to ensure that these issues are addressed correctly. In conjunction with the ESMF, the capacities of the agencies and other entities that will be responsible for environmental and social impact management and monitoring need to be strengthened through Component 2. Such recommended capacity-building actions are included in the estimated budget outlined in the ESMF.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with
an emphasis on potentially affected people.

Public consultation was carried out during the preparation of the ESIA and ESMF preparation. As per the OP 4.01 both ESMF and ESIA had two rounds of public consultation where grievance mechanisms were also discussed.

As mentioned earlier the Padang and Makassar ESIA plus ESMP were prepared by the cities based on existing environmental documents that had been consulted and disclosed in the past. Nevertheless, during the preparation of the ESIA and ESMP with newly proposed civil works such as rehabilitation and re-engineering, additional another two rounds public consultation were performed at the landfill office in each city. Subsequently, after incorporating the input from PAPs (Affected people including host community members, waste pickers, small-scale waste buyers and owners of livestock), documents have been publicly disclosed at places accessible by the PAPs (i.e. landfill office) and also via news media (Makassar on October 27, 2017, Padang on October 29, 2017). The ESIA and ESMP for the two cities have also been disclosed in InfoShop (October 24, 2017)

Likewise, stakeholder consultations for the ESMF have been carried out twice and the draft document has been disclosed in InfoShop (November 11, 2017) and in country (December 1, 2017).
### B. Disclosure Requirements (N.B. The sections below appear only if corresponding safeguard policy is triggered)

#### Environmental Assessment/Audit/Management Plan/Other

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<th>Date of submission for disclosure</th>
<th>Comments</th>
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For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors: 28-Feb-2018

#### "In country" Disclosure

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<td>Indonesia</td>
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#### Resettlement Action Plan/Framework/Policy Process

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#### Indigenous Peoples Development Plan/Framework

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“In country” Disclosure
Indonesia
01-Dec-2017

Comments
Together with ESMF

**C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting) (N.B. The sections below appear only if corresponding safeguard policy is triggered)**

**OP/BP/GP 4.01 - Environment Assessment**

Does the project require a stand-alone EA (including EMP) report?
Yes

If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?
Yes

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?
Yes

**OP/BP 4.11 - Physical Cultural Resources**

Does the EA include adequate measures related to cultural property?
Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?

Yes

OP/BP 4.10 - Indigenous Peoples

Has a separate Indigenous Peoples Plan/Planning Framework (as appropriate) been prepared in consultation with affected Indigenous Peoples?

Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Yes

If the whole project is designed to benefit IP, has the design been reviewed and approved by the Regional Social Development Unit or Practice Manager?

NA

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?

Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Yes
Is physical displacement/relocation expected?

No

Is economic displacement expected? (loss of assets or access to assets that leads to loss of income sources or other means of livelihoods)

TBD

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?

Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Yes

Have costs related to safeguard policy measures been included in the project cost?

Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

Yes
Director for Environmental Sanitation
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FOR MORE INFORMATION CONTACT

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APPROVAL

<table>
<thead>
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<th>Task Team Leader(s):</th>
<th>Frank Van Woerden</th>
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<td>Approved By</td>
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<tr>
<td>Safeguards Advisor:</td>
<td>Peter Leonard</td>
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<tr>
<td>Practice Manager/Manager:</td>
<td>Iain Shuker</td>
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<td>Country Director:</td>
<td>Rodrigo Chaves</td>
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