Kemenkes
RS Cipto Mangunkusumo

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Draft : Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP)



for Construction and Development of Hospitals to Improve Access and Quality of Services in order to Increase the Capacity of Government-Owned Teaching Hospitals (TRUST) Project for

RSUP Nasional Dr. Cipto Mangunkusumo

2026

Preface

RSUP Nasional Dr. Cipto Mangunkusumo (RSCM), as Indonesia's leading national referral and academic medical center, serves a vital role in providing specialized healthcare services, supporting medical education, and advancing clinical research. As healthcare needs continue to evolve and the demand for high-quality medical services increases, strengthening healthcare infrastructure and expanding service capacity have become essential priorities to ensure accessible and effective healthcare for present and future generations.

To address these needs, the Government of Indonesia, through the Ministry of Health, has secured financial assistance from the Asian Infrastructure Investment Bank (AIIB) under the Construction and Development of Hospitals to Improve Access and Quality of Services in Order to Increase the Capacity of Government-Owned Teaching Hospitals (TRUST) Project. Through this initiative, the development of RSCM is intended to enhance the hospital's ability to deliver world-class healthcare services while fostering a healthcare environment that is sustainable, resilient, and responsive to emerging challenges.

This Draft of Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP), collectively referred to as the "ESIA," have been prepared to evaluate the potential environmental and social risks, impacts, and opportunities associated with the proposed project. The ESIA establishes a framework for managing identified impacts through appropriate mitigation, monitoring, and stakeholder engagement measures throughout the project lifecycle. It demonstrates our commitment to responsible development practices, environmental protection, social inclusion, and compliance with both Indonesian regulatory requirements and the Environmental and Social Framework of AIIB. The Draft of ESIA and ESMP is a living document that will be updated when new information is available.

Beyond expanding healthcare capacity, the project is expected to generate broader social benefits by improving access to advanced medical treatment, strengthening healthcare education and research functions, and enhancing the resilience of critical health infrastructure. The project also seeks to integrate sustainability considerations into its planning and implementation, ensuring that environmental and social aspects are appropriately addressed alongside healthcare objectives.

Disclaimer

This Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) is intended to serve as a dynamic and evolving document. The findings, assessments, and management measures presented herein are based on information available at the time of preparation. As project activities progress, additional information may become available, or project conditions and requirements may change. Accordingly, this document may be revised or updated to reflect such developments and to ensure continued alignment with applicable legal requirements, environmental and social standards, and project commitments. Any revisions will be undertaken through appropriate consultation processes and in accordance with established environmental and social management procedures.

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On behalf of the Project Management Unit (PMU), RSUP Nasional Dr. Cipto Mangunkusumo, and the Ministry of Health, we express our sincere gratitude to all individuals and organizations that have contributed to the preparation of this ESIA, including government institutions, healthcare professionals, technical specialists, community representatives, academic partners, and other stakeholders. Their valuable input has helped strengthen the assessment process and support informed decision-making. Through continued cooperation and shared commitment, we believe this project will contribute significantly to the advancement of healthcare services in Indonesia and support the creation of a healthier, more sustainable, and resilient future.

Jakarta, August 2026



Dr. dr. Supriyanto, Sp. B, FINACS, M. Kes
PMU Director

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Executive Summary

Bahasa Indonesia

Latar Belakang Proyek dan Konteks Strategi

Pemerintah Indonesia, melalui Kementerian Kesehatan (Kemenkes), sedang melaksanakan Proyek "Peningkatan Kapasitas Rumah Sakit Pendidikan Milik Pemerintah" (*TRUST*). Didanai dengan bantuan keuangan dari *Asian Infrastructure Investment Bank* (AIIB), inisiatif nasional ini berfokus pada peningkatan delapan rumah sakit pendidikan utama di enam provinsi.

Sebagai rumah sakit rujukan nasional utama Indonesia dan fasilitas pendidikan utama untuk Fakultas Kedokteran Universitas Indonesia (FKUI), RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) menempati posisi penting dalam sistem kesehatan negara. Sejak perluasan program jaminan kesehatan universal nasional (BPJS Kesehatan), RSCM telah mengalami pertumbuhan eksponensial dalam jumlah pasien.

Namun, sebagian besar infrastruktur fisik rumah sakit saat ini terdiri dari bangunan bertingkat rendah yang sudah tua dan terfragmentasi yang telah melampaui masa pakai teknisnya. Tata letak ini sangat menghambat alur kerja klinis modern, meningkatkan biaya operasional, dan membatasi layanan bagi pasien. Untuk mengatasi hal ini, proyek ini mengusulkan pembangunan kembali secara besar-besaran, vertikal, dan terlokalisasi di dalam area kampus seluas 119.556 m² yang berlokasi di Jakarta Pusat. Transformasi ini bertujuan untuk menyelaraskan infrastruktur fisik RSCM dengan standar kesehatan dan keselamatan internasional, memperkuat posisinya dalam visi nasional "Indonesia Emas 2045".

Deskripsi Proyek dan Tahapan Strategi

Rencana pembangunan ini beralih dari model kampus yang tersebar luas menuju kompleks vertikal yang terintegrasi. Pengembangan ini berpusat pada pembongkaran bangunan-bangunan tua terpilih dan pembangunan simultan empat fasilitas berdensitas tinggi, yaitu::

Gedung Superblok 1 (12 Lantai + 2 Basement): Inti operasional dari rencana modernisasi. Fasilitas ini akan menampung Unit Medis Pusat, Departemen Gawat Darurat (UGD) yang diperluas, Pusat Kardiovaskular terintegrasi, departemen Kedokteran Nuklir tingkat lanjut, Laboratorium Pusat yang terkonsolidasi, dan Instalasi Pengolahan Air Limbah (IPAL) yang telah diperbarui.

Gedung Pusat Pelatihan (9 Lantai + 2 Basement): Pusat pendidikan yang dirancang untuk meningkatkan pelatihan medis. Fasilitas ini memiliki laboratorium simulasi medis multidisiplin, ruang kuliah modern untuk mahasiswa FKUI, perpustakaan digital terpusat, dan sayap administrasi akademik.

Gedung Rumah Tamu (9 Lantai + 2 Basement): Fasilitas pendukung yang dimaksudkan untuk mengakomodasi para ahli medis tamu, peserta pelatihan internasional, dan keluarga pasien jangka panjang yang datang dari provinsi terpencil.

Gedung Parkir & Pembangkit Listrik (9 Lantai / 11 Tingkat Terpisah): Fasilitas utilitas dan logistik strategis. Selain memaksimalkan tempat parkir kendaraan, fasilitas ini juga mengkonsolidasikan sistem daya cadangan darurat utama (generator), bengkel teknis, penyimpanan arsip yang aman, dan Stasiun Distribusi Limbah (WDS) modern untuk pemisahan sebelum pembuangan di luar lokasi.

Tahap dan Kontinuitas Pelayanan: Mengingat RSCM merupakan fasilitas vital 24/7, proyek ini menggunakan strategi pelaksanaan bertahap yang ketat. Pembangkit Listrik dan infrastruktur utilitas baru akan dibangun dan diuji terlebih dahulu. Layanan klinis akan dipindahkan ke bagian yang baru dibangun hanya setelah pengujian menyeluruh, memastikan bahwa kegiatan pembongkaran dan konstruksi tidak mengganggu perawatan pasien.

Kerangka Kelembagaan, Kebijakan, dan Regulasi

Proyek ini beroperasi di bawah kerangka peraturan yang kompleks, menjembatani mandat hukum nasional dengan standar internasional. Secara nasional, proyek ini mematuhi undang-undang perlindungan lingkungan Indonesia (UU No. 32/2009 dan PP No. 22/2021), kebijakan limbah perawatan kesehatan klinis (Permenkes No. 2/2023), kode ketenagakerjaan, dan mandat keselamatan kerja. Karena kampus ini terletak bersebelahan dengan bangunan bersejarah seperti Institut Eijkman, proyek ini sangat terikat oleh Undang-Undang Warisan Budaya (UU No. 11/2010), yang mewajibkan pemantauan getaran dan struktur yang ketat untuk aset bersejarah di sekitarnya.

Secara internasional, proyek ini selaras dengan Kerangka Kerja Lingkungan dan Sosial (ESF) 2024 AIIB, khususnya Standar Lingkungan dan Sosial 1 (ESS 1: Penilaian dan Pengelolaan Risiko dan Dampak Lingkungan dan Sosial) dan ESS 2 (Pengadaan Lahan dan Pemindahan, yang diterapkan di sini terutama untuk reorganisasi dan relokasi sukarela tenan di lahan rumah sakit).

Analisis Kesenjangan yang komprehensif mengidentifikasi area-area kritis di mana hukum nasional masih jauh dari standar AIIB: kurangnya hierarki mitigasi yang eksplisit, tidak adanya persyaratan ketahanan iklim lokal, dan kesenjangan historis dalam struktur perlindungan formal terkait Kekerasan Berbasis Gender (GBV) dan Eksploitasi, Pelecehan, dan Kekerasan Seksual (SEAH) dalam kontrak konstruksi. ESIA/ESMP ini menutup kesenjangan tersebut dengan menetapkan protokol manajemen standar global yang spesifik.

Kondisi Dasar Lingkungan dan Sosial

Penilaian dasar lingkungan yang dilakukan antara tahun 2024 dan 2026 mengungkapkan beberapa kendala lingkungan perkotaan utama:

Kerentanan Iklim dan Hidrologi: Terletak di zona perkotaan padat Jakarta Pusat, area proyek menghadapi puncak curah hujan monsun tahunan yang tinggi (Desember–Februari). Pemodelan hidrometeorologi menunjukkan kerentanan tinggi terhadap banjir, yang diperburuk oleh adanya potensi penurunan permukaan tanah perkotaan regional.

Pencemaran Hidrogeologi: Pengujian kualitas air dasar menunjukkan kontaminasi mikrobiologis yang parah di akuifer air tanah dangkal, ditandai dengan peningkatan kadar E. coli dan total *coliform*. Meskipun unit pengolahan air limbah internal rumah sakit saat ini memenuhi parameter kimia dasar, kapasitasnya terbatas, sehingga perluasan IPAL yang akan datang menjadi sangat penting.

Tekanan Akustik, Getaran dan Kualitas Udara: Tingkat kebisingan ambien dasar di sepanjang koridor transit utama (Jalan Pangeran Diponegoro) sudah mendekati batas peraturan ketat 55 dB untuk zona medis, dan untuk beberapa titik telah melewati batas. Hal ini menyisakan ruang yang sangat sempit untuk kebisingan terkait konstruksi, yang dapat mengganggu pemulihan pasien atau mengganggu diagnosis sensitif seperti MRI dan CT scan. Pemantauan titik getaran dan kualitas udara menunjukkan masih berada di bawah batas peraturan.

Keberagaman Ekonomi: Kondisi demografis di sekitar RSCM mencakup rumah tangga berpenghasilan rendah yang tinggal di kawasan permukiman padat (kampung perkotaan), serta penduduk kelas menengah dan atas yang tinggal di kawasan permukiman perkotaan yang terencana.

Mata Pencaharian dan Ketenagakerjaan: Sebagian besar tenaga kerja lokal bekerja di sektor jasa formal, perdagangan, ritel, perhotelan, dan administrasi pemerintahan. Namun demikian, terdapat pula sektor informal yang cukup signifikan di sekitar simpul transportasi (seperti stasiun kereta api dan terminal bus) serta kawasan komersial. Sektor ini mencakup pedagang kaki lima, penyedia jasa transportasi informal, dan pekerja harian lepas.

Kelompok Rentan: Perhatian khusus diberikan pada identifikasi rumah tangga berpenghasilan rendah dan populasi lanjut usia yang tinggal di lingkungan sekitar rumah sakit, karena mereka merupakan kelompok yang paling rentan terhadap perubahan kondisi lingkungan (misalnya banjir lokal, peningkatan suhu perkotaan, atau kebisingan akibat kegiatan konstruksi) serta sangat bergantung pada akses terhadap layanan kesehatan publik.

Akses terhadap Layanan Dasar: Layanan dasar seperti air bersih, sanitasi, dan pasokan listrik pada umumnya tersedia dengan memadai di kawasan perkotaan. Namun, permukiman informal masih menghadapi berbagai keterbatasan dalam memperoleh layanan tersebut. Ketersediaan layanan kesehatan juga masih menjadi tantangan, karena fasilitas pelayanan kesehatan tingkat pertama (Puskesmas) belum mampu memenuhi kebutuhan masyarakat akan layanan kesehatan spesialistik. Kondisi ini semakin menegaskan pentingnya pengembangan kapasitas rumah sakit.

Cagar Budaya: Kompleks RSCM memiliki beberapa bangunan yang telah ditetapkan sebagai Bangunan Cagar Budaya. Bangunan-bangunan tersebut merupakan bagian dari kompleks bekas Centrale Burgerlijke Ziekenhuis (CBZ) yang dibangun pada awal abad ke-20 dan memiliki nilai

penting dari aspek sejarah, arsitektur, ilmu pengetahuan, pendidikan, dan perkembangan pelayanan kesehatan di Indonesia. Aset cagar budaya tersebut, termasuk Fasad Bekas Gedung Utama CBZ (Instalasi Rawat Jalan Terpadu), Gedung Penyakit Dalam, Gedung Eijkman, Gardu Kios 3, dan Gedung G H, memiliki tingkat sensitivitas yang tinggi terhadap gangguan fisik akibat kegiatan pembongkaran dan konstruksi. Mengingat usia bangunan, karakteristik material, serta nilai keaslian yang harus dipertahankan, bangunan-bangunan tersebut rentan terhadap dampak tidak langsung seperti getaran konstruksi, penurunan tanah, pergerakan struktur, deposisi debu, maupun perubahan karakter visual kawasan yang dapat memengaruhi integritas dan nilai warisan budayanya.

Identifikasi dan Mitigasi Dampak

ESMP menetapkan matriks dampak dan tindakan mitigasi yang jelas di seluruh siklus proyek dengan tahapan sebagai berikut:

Tahap Pra-Konstruksi dan Konstruksi

Kebisingan dan Getaran Struktural: Pekerjaan sipil berat akan menghindari pemancangan tiang tradisional dengan benturan, dan menggunakan teknik pemancangan tiang tanpa benturan. Tirai akustik sementara dan peredam getaran lokal akan dipasang di sekitar zona aktif. Aktivitas konstruksi di dekat bangunan bersejarah dan unit diagnostik sensitif akan dibatasi pada waktu-waktu yang dijadwalkan, disertai dengan pemantauan secara berkala.

Kualitas Udara dan Pengendalian Debu: Mitigasi meliputi pemasangan layar debu perimeter setinggi 4 meter, pembasahan terus menerus pada tanah gembur, tempat pencucian roda wajib untuk truk logistik yang ada, dan larangan ketat untuk membakar puing-puing konstruksi di lokasi.

Tenaga Kerja dan Kesehatan & Keselamatan Kerja (K3): Kontraktor harus menerapkan Rencana Manajemen Tenaga Kerja khusus. Ini termasuk kepatuhan APD wajib, latihan keselamatan rutin, fasilitas sanitasi kamp terpisah, dan Kode Etik yang mengikat secara hukum untuk mencegah risiko GBV/SEAH antara tenaga kerja yang datang dan masyarakat sekitar.

Perlindungan Cagar Budaya: Seluruh kegiatan pembongkaran, penggalian, dan konstruksi harus direncanakan serta dilaksanakan dengan mengutamakan upaya pencegahan dan meminimalkan dampak terhadap Bangunan Cagar Budaya yang berada di dalam kawasan RSCM. Sebelum pekerjaan dimulai, Kontraktor wajib melaksanakan survei kondisi awal yang mencakup dokumentasi fotografi, identifikasi kondisi fisik bangunan, serta observasi terhadap elemen-elemen yang berpotensi rentan terhadap dampak konstruksi. Selama pelaksanaan pekerjaan, perlindungan bangunan cagar budaya dilakukan melalui penetapan zona perlindungan, pemasangan pagar pengaman di sekitar aset cagar budaya, pengendalian debu, pemantauan getaran menggunakan seismograf sesuai standar DIN 4150-3, serta inspeksi berkala oleh tenaga ahli cagar budaya. Getaran akibat kegiatan konstruksi harus dikendalikan agar nilai Peak Particle

Velocity (PPV) tidak melebihi ambang batas yang ditetapkan untuk bangunan yang sensitif terhadap getaran. Selain itu, Prosedur Penemuan Tak Terduga (Chance Find Procedure) wajib diterapkan untuk memastikan bahwa setiap temuan struktur, artefak, atau tinggalan budaya yang sebelumnya tidak teridentifikasi selama proses penggalian dilindungi, didokumentasikan, dilaporkan kepada instansi yang berwenang, dan ditangani sesuai ketentuan yang berlaku.

Fase Operasional dan Pasca-Operasional

Perawatan Kesehatan dan Pengelolaan Limbah Berbahaya: Fase operasional akan memperkenalkan protokol pemisahan sumber yang canggih dan berkode warna untuk aliran limbah bio-infeksius, radioaktif, kimia, dan limbah kota umum. Stasiun Distribusi Limbah (WDS) yang dimodernisasi akan menyimpan bahan berbahaya dengan aman sebelum dikumpulkan oleh kontraktor limbah berbahaya pihak ketiga yang bersertifikasi.

Ketahanan Iklim dan Desain Bangunan Hijau: Bangunan baru akan menargetkan sertifikasi bangunan hijau, mengintegrasikan sistem HVAC efisiensi tinggi, jaringan penerangan LED, sistem pemanenan air hujan, dan jaringan drainase mikro. Untuk mengurangi risiko banjir perkotaan, elevasi lantai dasar semua struktur baru akan ditetapkan minimal +0,50 meter di atas jalan raya sekitarnya.

Pemantauan Bangunan Cagar Budaya: Setelah seluruh kegiatan konstruksi selesai, seluruh Bangunan Cagar Budaya di kawasan RSCM harus menjalani inspeksi kondisi akhir (post-construction condition assessment) untuk membandingkan kondisi bangunan sebelum dan sesudah pelaksanaan proyek. Pemantauan berkala perlu dilakukan untuk mengidentifikasi kemungkinan terjadinya penurunan tanah, retakan, deformasi struktur, atau dampak lain yang muncul setelah konstruksi selesai. Apabila ditemukan kerusakan yang berkaitan dengan kegiatan proyek, tindakan konservasi dan perbaikan harus segera dilaksanakan oleh tenaga ahli yang kompeten sesuai dengan ketentuan peraturan perundang-undangan mengenai cagar budaya dan Cultural Heritage Management Plan (CHMP) yang telah disetujui.

Keterlibatan Pemangku Kepentingan, Penanganan Keluhan, dan Implementasi

Rencana Keterlibatan Pemangku Kepentingan (*Stakeholder Engagement Plan*/SEP) yang khusus mendukung proyek ini, merinci konsultasi publik dengan berbagai pihak yaitu tokoh masyarakat setempat (perwakilan lingkungan Pegangsaan dan Kenari, Forum Kewaspadaan Dini Masyarakat/FKDM, Pemberdayaan Kesejahteraan Keluarga/PKK, dan Lembaga Musyawarah Kelurahan/LMK), otoritas pemerintah daerah (Satpol PP, Dinas Kesehatan Provinsi, Dinas Pekerjaan Umum, Dinas Pertamanan dan Hutan Kota, Dinas Pemadam Kebakaran, Dinas Pekerjaan Umum dan Penataan Ruang, Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu DKI Jakarta, serta Dinas Kebudayaan Provinsi), staf rumah sakit, dan kelompok advokasi pasien.

Untuk mengatasi kekhawatiran secara transparan, proyek ini menerapkan Mekanisme Penyelesaian Keluhan (*Grievance Redress Mechanism*/GRM) bertingkat. GRM memiliki dua jalur terpisah: saluran eksternal bagi warga sekitar untuk melaporkan gangguan lingkungan seperti kebisingan atau debu, dan saluran internal bagi pekerja konstruksi untuk melaporkan perselisihan tenaga kerja, masalah keselamatan, atau pelecehan secara rahasia.

Akuntabilitas untuk ESMP dibagi di beberapa tingkatan. Unit Manajemen Proyek (*Project Management Unit*/PMU) di Kementerian Kesehatan menangani pengawasan tingkat tinggi, sementara Unit Implementasi Proyek (*Project Implementation Unit*/PIU) lokal di RSCM mengelola kepatuhan harian. Auditor lingkungan dan sosial independen akan melakukan inspeksi lokasi secara berkala untuk memastikan proyek memenuhi tujuan lingkungan, sosial, dan keselamatannya sepanjang siklus hidupnya.

Kesimpulan

Proyek pengembangan Rumah Sakit Umum Pusat Nasional (RSUPN) Dr. Cipto Mangunkusumo merupakan langkah maju yang signifikan dalam pengembangan infrastruktur layanan kesehatan di Jakarta. Dengan mengintegrasikan keberlanjutan lingkungan, tanggung jawab sosial, dan langkah-langkah keselamatan kerja, proyek ini bertujuan untuk meningkatkan layanan kesehatan dan meminimalkan dampak negatif terhadap masyarakat serta ekosistem sekitar. Dengan strategi mitigasi yang komprehensif, proyek ini diharapkan dapat memberikan kontribusi besar terhadap pelayanan kesehatan masyarakat dan pelestarian lingkungan, yang pada gilirannya dapat turut serta berkontribusi dalam menciptakan keseimbangan antara pembangunan dan keberlanjutan.

English

Project Background, Context and Strategic Rationale

The Government of Indonesia, through the Ministry of Health (MoH), is implementing the "The Capacity of Government-Owned Teaching Hospitals" (TRUST) Project. Funded with financial assistance from the Asian Infrastructure Investment Bank (AIIB), this initiative focuses on upgrading eight key apex teaching hospitals across six provinces.

As Indonesia's primary national referral hospital and the chief teaching facility for the Universitas Indonesia Faculty of Medicine (FKUI), RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) occupies a critical position in the country's healthcare system. Since the expansion of the national universal health coverage scheme (BPJS Kesehatan), RSCM has experienced exponential growth in patient volumes.

However, much of the hospital's current physical infrastructure consists of aging, fragmented low-rise structures that have exceeded their technical lifespan. This layout severely bottlenecks modern clinical workflows, inflates operational costs, and limits the expansion of high-end specialized tertiary care. To address this, the project proposes a massive, vertical, and localized redevelopment within the existing 119,556 m² located in Central Jakarta. This transformation aims to align RSCM's physical infrastructure with international healthcare and safety standards, solidifying its place in the national vision for "Golden Indonesia 2045."

Project Description and Phasing Strategy

The proposed development shifts away from a spread-out campus model toward an integrated, vertical complex. The development centers around the demolition of selected old buildings and the simultaneous construction of four high-density facilities:

Superblock 1 Building (12 Floors + 2 Basements): The operational core of the modernization plan. This facility will house the Central Medical Unit, an expanded Emergency Department (UGD), an integrated Cardiovascular Center, an advanced Nuclear Medicine department, consolidated Central Laboratories, and an overhauled Wastewater Treatment Plant (IPAL).

Training Center Building (9 Floors + 2 Basements): An educational hub designed to elevate medical training. It features multi-disciplinary medical simulation labs, modern lecture halls for FKUI students, a centralized digital library, and academic administrative wings.

Guest House Building (9 Floors + 2 Basements): A support facility intended to accommodate visiting medical experts, international trainees, and families of long-term patients traveling from remote provinces.

Parking Building & Power House (9 Floors / 11 Split-Levels): A strategic utility and logistics facility. Beyond maximizing vehicle parking slots, it consolidates the primary emergency backup power

systems (generators), technical workshops, secure archive storage, and a modernized Waste Distribution Station (WDS) for segregation before off-site disposal.

Phasing and Continuity of Care: Given that RSCM is a critical 24/7 lifeline facility, the project utilizes a strict phased execution strategy. The new Power House and utility infrastructure will be built and tested first. Clinical services will migrate to newly constructed sections only after rigorous commissioning, ensuring that demolition and construction activities do not interrupt patient care.

Institutional, Policy, and Regulatory Framework

The project operates under a complex regulatory framework, bridging national statutory mandates with international standards. Nationally, it complies with Indonesia's environmental protection statutes (UU No. 32/2009 and PP No. 22/2021), clinical healthcare waste policies (Permenkes No. 2/2023), labor codes, and occupational safety mandates. Because the campus sits adjacent to historic structures like the Eijkman Institute, it is heavily bound by the Cultural Heritage Law (UU No. 11/2010), requiring strict vibration and structural monitoring for surrounding historical assets

Internationally, the project aligns with the AIIB's Environmental and Social Framework (ESF) 2024, specifically Environmental and Social Standards 1 (ESS 1: Assessment and Management of Environmental and Social Risks and Impacts) and ESS 2 (Land Acquisition and Involuntary Resettlement, applied here primarily to the reorganization and voluntary relocation of formal vendors on hospital buildings that will be demolished).

A comprehensive Gap Analysis identified critical areas where national laws fall short of AIIB standards: the lack of explicit mitigation hierarchies, missing localized climate resilience requirements, and a historical gap in enforceable contract clauses, such as mandatory Worker Codes of Conduct and dedicated Grievance Redress Mechanisms (GRM) regarding Gender-Based Violence (GBV) and Sexual Exploitation, Abuse, and Harassment (SEAH) within construction contracts. This ESIA/ESMP closes these gaps by instituting specific global-standard management protocols.

Environmental and Social Baseline Conditions

Environmental baseline assessments conducted between 2024 and 2026 revealed several key urban environmental constraints:

Climate and Hydrological Vulnerabilities: Located in a dense urban zone of Central Jakarta, the project area faces high annual monsoonal rainfall peaks (December–February). Hydro-meteorological modelling indicates high vulnerability to pluvial and fluvial flooding, exacerbated by regional urban subsidence.

Hydrogeological Pollution: Baseline water quality testing showed severe microbiological contamination in shallow groundwater aquifers, characterized by elevated E. coli and total

coliform levels. While the hospital's internal wastewater treatment units currently meet basic chemical parameters, their capacity is strained, making the upcoming IPAL expansion essential.

Acoustic and Air Quality Strains: Baseline ambient noise levels along the main transit corridor (Jalan Pangeran Diponegoro) already push against the strict 55 dB regulatory ceiling for medical zones, and some points above the threshold. This leaves a very narrow margin for construction-related noise, which could disturb patient recovery or interfere with sensitive diagnostics like MRI and CT scanning. Monitoring results for vibration and ambient air quality demonstrated compliance with the applicable regulatory standards, with all measured parameters remaining below the prescribed limits.

Economic diversity: The demographic around RSCM includes low-income households living in densely packed urban kampongs as well as middle- and upper-class residents in planned urban districts.

Livelihoods and Employment: The formal service industry, commerce, retail, hospitality, and public administration employ a large section of the local workers. However, a considerable informal sector occurs around transportation hubs (such as adjacent train stations and bus terminals) and commercial districts, which includes street sellers, informal transport providers, and casual laborers.

Vulnerable Groups: Close emphasis is devoted to mapping low-income households and elderly populations residing within the immediate neighborhood of the hospital since they are the most vulnerable groups prone to environmental changes. (e.g., localized flooding, urban heat, or construction noise) and are highly reliant on accessible public health safety nets.

Access to Services: Basic services including water, sewage, and power are adequate in cities, but informal settlements have difficulties. Healthcare availability is a challenge, with public health facilities (puskesmas) unable to satisfy demand for specialist services, emphasizing the need for hospital growth.

Cultural Heritage: The RSCM complex contains several buildings that have been officially designated as Cultural Heritage Buildings. These buildings form part of the former Centrale Burgerlijke Ziekenhuis (CBZ) complex, which was established in the early twentieth century and possesses significant historical, architectural, scientific, educational, and healthcare heritage values in Indonesia. The designated heritage assets, including the Former CBZ Main Building Façade (Integrated Outpatient Installation), the Internal Medicine Building, the Eijkman Building, Gardu Kios 3, and G H Building, are highly sensitive to physical disturbances associated with demolition and construction activities. Owing to their age, original construction materials, and the need to preserve their authenticity, these heritage buildings are particularly vulnerable to indirect impacts such as construction-induced vibration, ground settlement, structural movement, dust deposition, and changes to the visual character of the surrounding environment, all of which may compromise their structural integrity and heritage significance.

Impact Identification and Mitigation

The ESMP establishes a clear matrix of impacts and mitigation actions across the project lifecycle:

Pre-Construction and Construction Phase

Noise and Structural Vibration: Heavy civil works will avoid traditional impact pile-driving, utilizing non-impact bored piling techniques instead. Temporary acoustic curtains and localized vibration dampers will be installed around active zones. Construction activities near heritage buildings and sensitive diagnostic units will be restricted to scheduled windows, accompanied by regular monitoring.

Air Quality and Dust Controls: Mitigations include installing 4-meter-high perimeter dust screens, continuous wetting of loose soils, mandatory wheel-washing bays for existing logistics trucks, and a strict ban on burning construction debris on-site.

Labor and Occupational Health & Safety (OHS): Contractors must enforce a dedicated Labor Management Plan. This includes mandatory PPE compliance, regular safety drills, labor influx, separate camp sanitation facilities, and a legally binding Code of Conduct to prevent GBV/SEAH risks between the incoming workforce and the surrounding community as well as preventing communicable disease, traffic accidents, and to maintain safety of patients/health professionals.

Cultural Heritage Protection: All demolition, excavation, and construction activities must be planned and executed with a primary focus on preventing and minimizing adverse impacts on the Cultural Heritage Buildings located within the RSCM precinct. Prior to the commencement of works, the Contractor is strictly mandated to conduct a comprehensive baseline dilapidation survey, encompassing photographic documentation, physical condition assessments, and the identification of architectural elements highly vulnerable to construction-induced impacts. During the execution phase, the protection of these heritage assets shall be enforced through the establishment of strict demarcation zones, the installation of protective hoarding around the assets, rigorous dust control measures, continuous vibration monitoring utilizing seismographs in compliance with the DIN 4150-3 standard, and periodic inspections by a qualified heritage expert. Construction-induced vibrations must be strictly controlled to ensure that the Peak Particle Velocity (PPV) does not exceed the established thresholds for vibration-sensitive historic structures. Furthermore, a Chance Find Procedure must be rigorously implemented to ensure that any previously unidentified subsurface structures, archaeological artifacts, or cultural remains discovered during the excavation process are immediately protected, accurately documented, reported to the relevant authorities, and managed in accordance with applicable statutory regulations.

Operational and Post-Operational Phase

Healthcare and Hazardous Waste Management: The operational phase will introduce an advanced, color-coded source-segregation protocol for bio-infectious, radioactive, chemical, and general municipal waste streams. The modernized Waste Distribution Station (WDS) will store hazardous materials securely before they are collected by certified third-party hazardous waste contractors.

Climate Resilience and Green Building Design: New buildings will target green building certifications, integrating high-efficiency HVAC systems, LED lighting networks, rainwater harvesting systems, and a micro-drainage network. To mitigate urban flood risks, the finished ground floor elevations of all new structures will be set at a minimum of +0.50 meters above the surrounding roadway.

Post-Construction Heritage Monitoring: Upon the completion of all construction activities, all Cultural Heritage Buildings within the RSCM precinct must undergo a comprehensive post-construction condition assessment to evaluate and compare their structural integrity against the pre-construction baseline data. Periodic monitoring shall be conducted to identify any delayed project-induced impacts, such as ground settlement, masonry cracking, structural deformation, or other latent defects that may emerge after the works have concluded. Should any project-related damage be detected, immediate conservation and restorative interventions must be executed by qualified heritage professionals. These remedial works must strictly comply with applicable cultural heritage legislation and the approved Cultural Heritage Management Plan (CHMP).

Stakeholder Engagement, Grievance Redress, and Implementation

A dedicated Stakeholder Engagement Plan (SEP) supports the project, detailing public consultations with local community leaders (Representatives from the Pegangsaan and Kenari Neighbourhoods, the Community Early Warning Forum (FKDM), the Family Empowerment and Welfare Movement (PKK), and the Neighborhood Community Organization (LMK)), municipal authorities (The Civil Service Police, the Provincial Health Department, the Public Works Department, the Parks and Urban Forestry Department, the Fire Department, the Public Works and Spatial Planning Department, the Jakarta Capital Investment and Integrated Services Department, and the Provincial Culture Department), hospital staff, and patient advocacy groups.

To address concerns transparently, the project institutes a multi-tiered Grievance Redress Mechanism (GRM). The GRM features two separate pathways: an external channel for neighboring residents to report environmental disturbances like noise or dust, and an internal channel for construction workers to report labor disputes, safety concerns, or harassment confidentially.

Implementation Structure: Accountability for the ESMP is split across multiple levels. A Project Management Unit (PMU) within the Ministry of Health handles high-level oversight, while a

localized Project Implementation Unit (PIU) within RSCM manages daily compliance. Independent environmental and social auditors will conduct regular site inspections to ensure the project meets its environmental, social, and safety goals throughout its lifecycle.

Conclusion

The expansion project of the RSUPN Dr. Cipto Mangunkusumo (RSCM) represents a significant step forward in the development of healthcare infrastructure in Jakarta. By integrating environmental sustainability, social responsibility, and occupational safety measures, the project aims to improve healthcare services and minimize negative impacts on the surrounding community and ecosystem. With a comprehensive mitigation strategy, the project is expected to significantly contribute to public healthcare and environmental preservation, which in turn can contribute to creating a balance between development and sustainability.

1. Introduction

The National Medium-Term Development Plan (RPJMN) 2025–2029 adopts the development vision articulated by the President, namely "Advancing Indonesia Together Toward a Golden Indonesia 2045." This vision is further elaborated into eight Presidential Mission Pillars (Asta Cita), which serve as the national priorities, as follows: (i) Strengthening the ideology of Pancasila, democracy, and human rights; (ii) Consolidating national defense and security systems and advancing national self-reliance through food, energy, and water security, as well as the development of sharia economics, the digital economy, the green economy, and the blue economy; (iii) Continuing infrastructure development and expanding quality employment opportunities, fostering entrepreneurship, strengthening the creative industry, and developing agro-maritime industries in production centers through the active role of cooperatives; (iv) Enhancing human capital development, science, technology, education, health, sports achievement, gender equality, and the empowerment of women, youth, and persons with disabilities; (v) Advancing downstream industrialization and developing natural resource–based industries to increase domestic value added. (vi) Advancing development from villages and the grassroots level to promote economic growth, reduce disparities, and alleviate poverty; (vii) Strengthening political, legal, and bureaucratic reforms, as well as enhancing efforts to prevent and combat corruption, narcotics, illegal gambling, and smuggling; and (viii) Strengthening the alignment of human life with natural and cultural environments and enhancing interfaith tolerance to achieve a just and prosperous society (Ministry of National Development Planning, 2026).

In implementing development programs to achieve the targets outlined in the RPJMN 2025–2029, the government requires adequate financing sources to support development execution. To fund national development, the government utilizes the State Budget (APBN) and regional budgets (APBD), as well as other financing sources, including both domestic and external borrowing (Ministry of National Development Planning, 2026).

The Government of Indonesia, through the Ministry of Health, has requested financial support from the Asian Infrastructure Investment Bank (AIIB) for the "Construction and Development of Hospitals to Improve Access and Quality of Services in Order to Increase the Capacity of Government-Owned Teaching Hospitals (TRUST) Project." This flagship initiative aims to expand the capacity and enhance the quality of services of government-owned teaching hospitals and is included in AIIB's Multi-Year Rolling Pipeline (MYRP) for Indonesia's health sector.

The objectives of the TRUST Project such as enhancing the capacity and quality of teaching hospitals and strengthening the competence of healthcare human resources, transforming teaching hospitals into smart hospitals and reducing the number of patients seeking medical treatment abroad (Ministry of National Development Planning, 2026). The proposed financing will support investments in eight hospitals across six provinces: Jakarta (two hospitals), West Java (two

hospitals), Banten (one hospital), Central Java (one hospital), East Java (one hospital), and West Sumatra (one hospital).

In support of processing of the TRUST Project financing by AIIB, Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs) will be required for each of the proposed hospital sub-projects, in accordance with AIIB's Environmental and Social Framework (ESF).

Regarding that, one of the beneficial hospitals of the TRUST project is RSUP Nasional Dr. Cipto Mangunkusumo (RSCM), has to prepare of ESIA an ESMP, including a gender analysis/Gender Action Plan (GAP), and other related instruments (such as land/resettlement, if required), including the identification of risks and impacts, development of mitigation measures, stakeholder engagement, and support for implementation and capacity building.

1.1 Project Overview and Rationale

1.1.1 Project Overview

RSUP Nasional Dr. Cipto Mangunkusumo (RSCM), as the premier national referral hospital (*Rumah Sakit Umum Pusat Nasional*) and the primary teaching hospital for the Faculty of Medicine, Universitas Indonesia (FKUI), is undertaking a comprehensive modernization, integration, and infrastructure upgrading project. Situated in a highly urbanized and dense area of Central Jakarta on Jalan Pangeran Diponegoro No. 71, Kenari, Senen, the hospital continuously faces an exponential increase in patient volume and healthcare complexity.

The proposed project focuses on the optimization of land utilization through vertical expansion, structural retrofitting, and the integration of specialized medical centers within the existing hospital footprint. The scope includes upgrading smart-building technologies, expanding advanced clinical care towers, improving integrated utility infrastructure (including the expansion of the Wastewater Treatment Plant/IPAL and Temporary Hazardous Waste Storage/TPS B3), and embedding climate-resilient and green design standards. By upgrading these facilities, the project aims to establish a highly sustainable, safe, and disaster-resilient clinical environment capable of delivering world-class, complex tertiary care to patients nationwide under the National Health Insurance (JKN/BPJS) framework.

The Project is classified as Category B under the AIIB Environmental and Social Policy (ESP). This classification is appropriate because the Project will be implemented within an existing healthcare facility, and its potential environmental and social impacts are expected to be site-specific, limited in scale, and largely reversible. The anticipated impacts can be effectively avoided, minimized, or mitigated through standard engineering design, good construction and operational practices, and the implementation of appropriate environmental and social management measures. No significant, irreversible, cumulative, or unprecedented adverse environmental or social impacts

are anticipated. Accordingly, the Project does not meet the criteria for classification as a Category A project under the AIIB ESP.

Table 1. Site Area and Building Area

Hospital Name	Land Area	Building Area
RSUP Nasional Dr. Cipto Mangunkusumo (RSCM)	119.556 m²	366.271 m²

1.1.2 Locations

The proposed infrastructure modification, vertical expansion, and modernization project will take place entirely within the existing boundary of RSUP Nasional Dr. Cipto Mangunkusumo (RSCM). Administratively, the hospital complex is located at Jalan Pangeran Diponegoro No. 71, Kenari Sub-district (*Kelurahan Kenari*), Senen District (*Kecamatan Senen*) and Pegangsaan Sub-district (*Kelurahan Pegangsaan*), Menteng District (*Kecamatan Menteng*), Central Jakarta Administrative City (*Kota Administrasi Jakarta Pusat*), Special Capital Region of Jakarta, 10430.

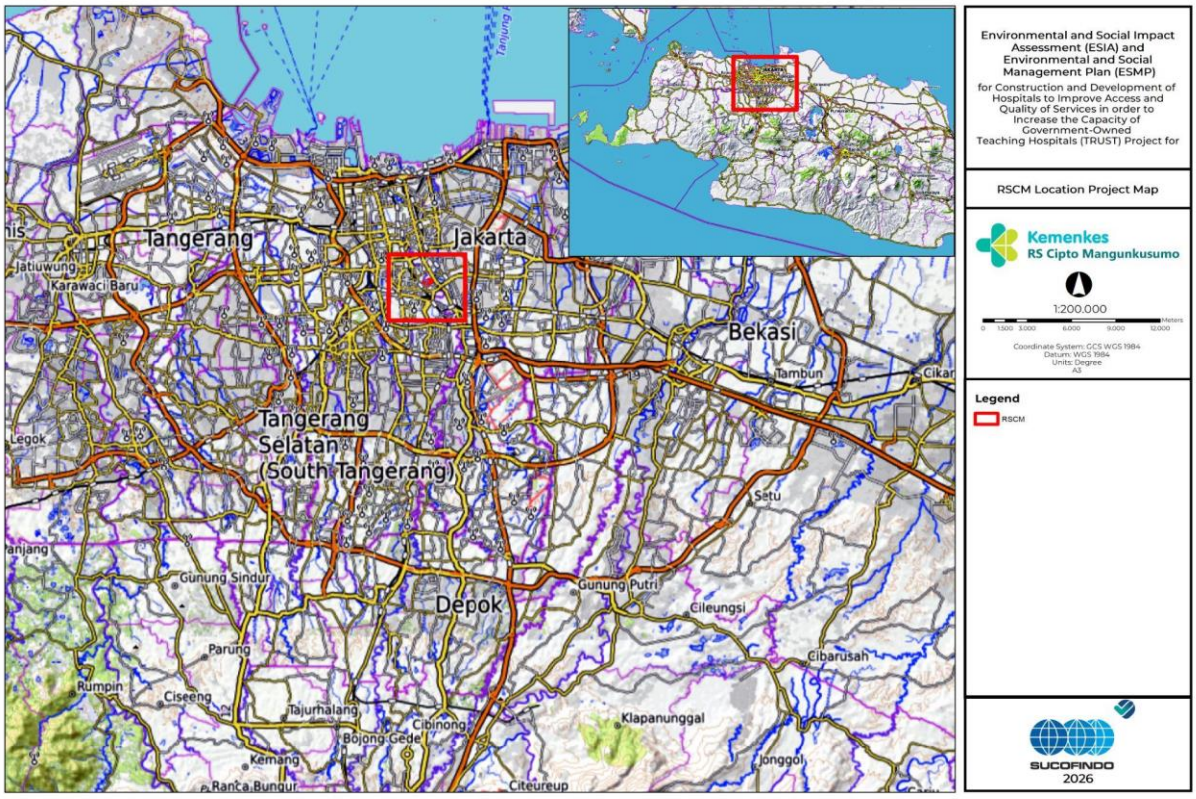


Figure 1. Site Location

Geographically, the RSCM complex is situated within the dense, central urban core of Jakarta. It occupies a strategic, highly connected institutional corridor, situated approximately at coordinates:

- Latitude: 6°11'48" S
- Longitude: 106°50'54" E

The total land area under state-registered ownership and management of the Ministry of Health for RSCM spans multiple contiguous plots, providing a consolidated, self-contained footprint for all ongoing and proposed healthcare expansion activities.

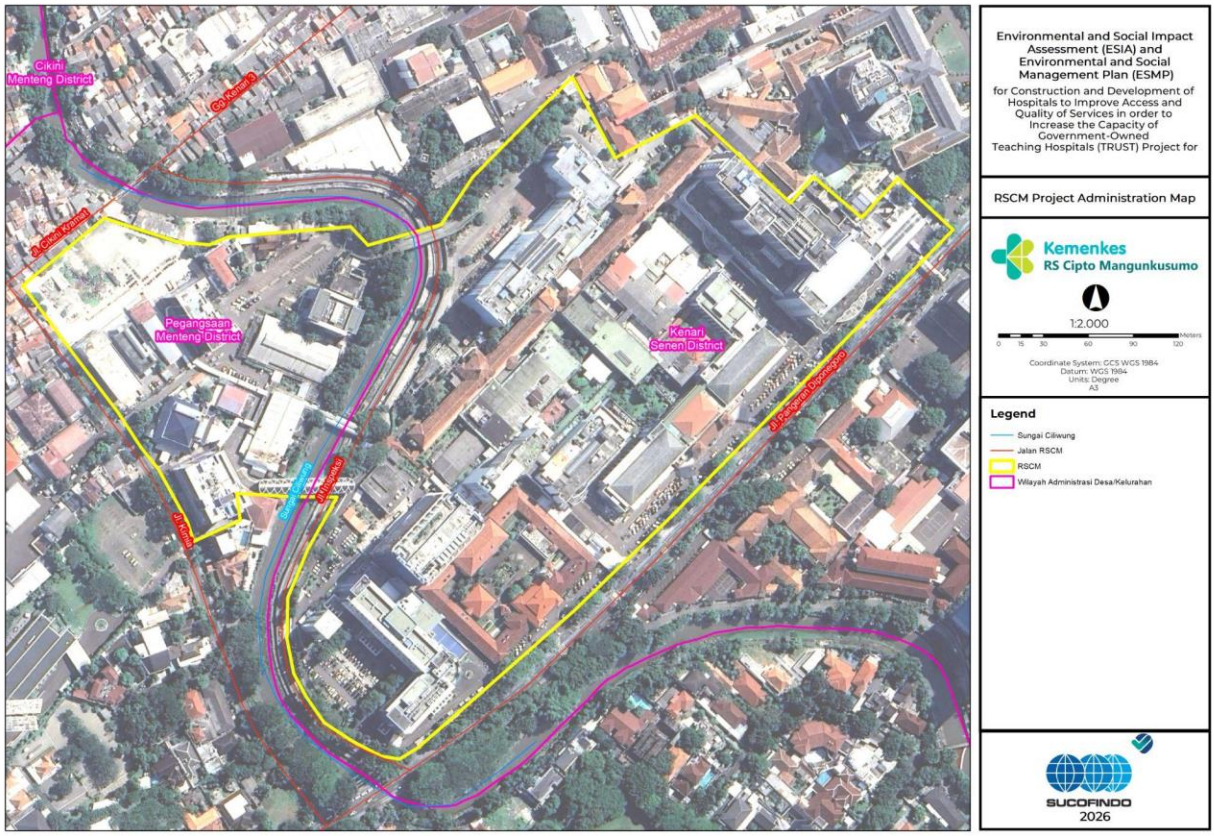


Figure 2. Site Administration Location

The RSCM complex is situated within an intensely developed urban area with a diverse mix of institutional, residential, commercial, and transport infrastructures. The immediate environmental and social boundary conditions are defined as follows:

- Northern Boundary: The project site is bordered by institutional buildings, supporting clinical offices, and highly dense residential settlements (*kampungs*) stretching toward the Kramat and Salemba areas, interspersed with local municipal access roads.
- Southern Boundary: The site is directly fronted by Jalan Pangeran Diponegoro, a primary urban arterial road serving as a crucial East-West transit corridor in Central Jakarta. Directly

across this thoroughfare lies the Faculty of Medicine, Universitas Indonesia (FKUI) campus and the historic residential enclave of Menteng.

- Eastern Boundary: The complex is bounded by major commercial networks, regional administrative assets, and the strategic Jalan Salemba Raya transit corridor, which includes the TransJakarta Bus Rapid Transit (BRT) routes and heavy commercial shop-houses (*ruko*).
- Western Boundary: The site transitions toward the Cikini urban zone, bounded by the elevated track of the Jakarta Commuter Line railway network and the Ciliwung River canal buffer systems.

1.1.3 Project Alternatives

In accordance with international environmental and social assessment guidelines, a comprehensive analysis of alternatives was conducted during the project planning stage. This evaluation ensures that the selected engineering and spatial strategy optimizes clinical delivery while minimizing negative environmental and social footprints in the surrounding urban ecosystem. Three primary scenarios were evaluated: the "No Project" alternative, the alternative site location scenario, and the chosen on-site vertical expansion and optimization strategy.

1. The "No Project" (Do Nothing) Alternative

The "No Project" alternative assumes that the infrastructure modernization, technological upgrades, and spatial expansion at RSCM would not take place, maintaining the current operational status quo.

- Environmental and Social Baseline: From a short-term perspective, this alternative eliminates localized construction impacts, such as temporary dust emission, noise, vibrations, and traffic disruptions along Jalan Pangeran Diponegoro.
- Disadvantages and Strategic Failure: This scenario fails to address the critical macro-health crises facing the nation. Over time, the structural deterioration of older functional buildings would accelerate, and the capacity of the hospital would remain severely capped. Faced with an exponential rise in patient volume under the National Health Insurance (JKN/BPJS Kesehatan) system, the hospital would experience severe bottlenecks, long patient wait times, and extreme overcrowding in intensive units. Furthermore, failing to upgrade older utility networks (such as the IPAL and electricity backups) would increase the long-term risk of structural failures and environmental non-compliance with contemporary standards. Therefore, the "No Project" alternative was rejected due to its severe negative public health implications.

2. Alternative Site Location Scenario

This alternative evaluated the possibility of constructing a brand-new, modern hospital facility on a greenfield or undeveloped plot of land outside the central urban core of Jakarta (e.g., in the satellite cities of Bogor, Depok, Tangerang, or Bekasi) to accommodate the rising tertiary care demand.

- Advantages: A new location outside the city center would offer vast horizontal space, eliminating structural constraints, avoiding dense urban traffic networks, and significantly reducing temporary construction disturbances to active patients.
- Disadvantages and Logistical Failure: RSCM functions as the historical and practical pinnacle of the Indonesian referral hierarchy and serves as the primary teaching hospital for the Faculty of Medicine, Universitas Indonesia (FKUI). Relocating the hospital's specialized clinical centers away from the FKUI campus would break critical medical education loops, disrupt academic research, and isolate specialized medical faculties. Furthermore, a peripheral location would drastically reduce accessibility for low-income patients relying on Jakarta's central multi-modal public transit network (such as the Cikini Commuter Line station and TransJakarta lines). Developing a new site would also require significant land acquisition, potential involuntary resettlement, and massive new capital investment for foundational infrastructure. Consequently, the alternative site scenario was deemed socio-economically and structurally unfeasible.

3. Site Vertical Expansion and Optimization Strategy Alternative

This alternative will enhance hospital services beyond current capacity. It includes several additional facilities to support hospital operations, such as HCU, airborne isolation units, CICU isolation and CICU LVAD units, Stroke HCU, additional inpatient rooms, and parking areas.

- Advantages: With site vertical expansion and optimization strategy alternative, RSCM will add 83 capacity units to Superblock Building 1, comprising 3 Red Zone beds, 8 Yellow Zone beds, 2 Green Zone beds, 8 ED ICU beds, 20 ED HCU beds, 4 airborne isolation beds, 19 emergency ward beds, 3 CICU beds, 1 isolation CICU bed, 1 LVAD CICU bed, 2 ICCU beds, 6 Stroke HCU beds, 2 non-intensive inpatient beds, 2 radiation oncology beds, 2 nuclear medicine inpatient beds and parking area. This alternative was selected for the RSCM development plan.

1.1.4 Project Rationale

As the apex of Indonesia's tiered healthcare referral system under the Ministry of Health (MoH), RSCM is responsible for addressing the country's most severe and critical medical cases, ranging from oncology, organ transplantation, and cardiovascular interventions to advanced pediatrics and neonatal intensive care. The current expansion and integration project is structurally vital to fulfill national health strategic goals, specifically expanding healthcare access, eliminating massive bottlenecking in patient queues, and ensuring that cutting-edge diagnostics and therapeutic options are structurally available to all layers of Indonesian society.

Over the decades, the number of patients has continued to increase significantly, both from Jakarta and across the country, reflecting its critical role in providing specialized care for women and children (see chart below).

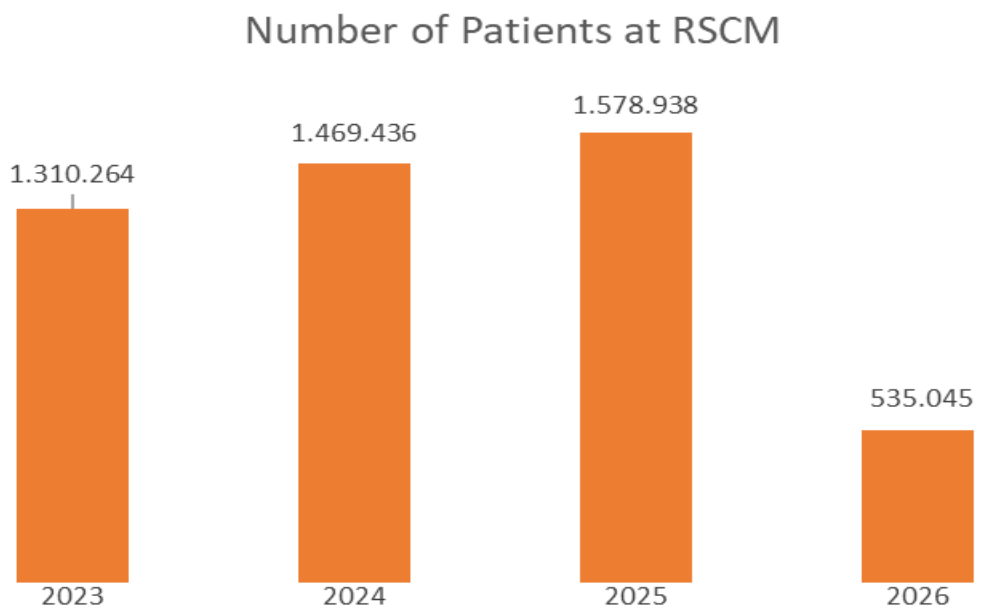


Figure 3. RSCM Number of Patients from 2023 to mid of 2026

Source: RSCM, 2026

Despite the compounding and exponential rise in patient volume, several critical functional buildings and core clinical blocks within the RSCM complex have undergone natural material and structural deterioration over decades of continuous 24/7 operation. Much of the older infrastructure is reaching its cyclical engineering limits and no longer aligns with the stringent, contemporary international standards required for top-tier health facilities. Furthermore, a significant portion of the specialized medical equipment, diagnostic support facilities, and intra-hospital logistics systems have become outdated. This technological lag severely restricts the hospital's ability to seamlessly deliver modern, high-precision, and high-quality tertiary healthcare services that match the sophisticated needs of a modern, complex patient load.

1.2 Project Objective

The project aims to enhance the availability, accessibility, and quality of the premier national referral hospital (*Rumah Sakit Umum Pusat Nasional*) and the primary teaching hospital for the Faculty of Medicine, Universitas Indonesia (FKUI).

1.3 Project Activities and Expected Results

The project encompasses the following activities:

1. Vertical Expansion and Structural Integration: The project involves the strategic construction of new integrated medical towers and modernized pavilions within the legally owned RSCM

compound. The new vertical buildings will drastically optimize the hospital's spatial footprint and increase the total bed capacity of RSCM from its existing capacity to an expanded volume, substantially boosting the allocation for intensive care suites (ICU, NICU, PICU) and standard inpatient wards.

2. Specialized Equipment Upgrades and Service Integration: The project will upgrade advanced medical equipment and fully integrate RSCM's diverse clinical departments—both physically, digitally, and operationally—to enhance service coordination and overall quality of healthcare service for inpatients and outpatients. The upgraded medical technologies and seamless structural integration will allow the apex referral hospital to adapt to changing demographics and emerging disease patterns, including an aging population, a sharp rise in non-communicable diseases (NCDs), and climate-sensitive health conditions at the national level.
3. Green Healthcare Model and Climate Resilience: The construction and infrastructure upgrades will strictly follow a green healthcare model incorporating climate change mitigation and adaptation measures while prioritizing high energy efficiency. The facility modernization will elevate critical mechanical, electrical, and plumbing (MEP) components and enhance internal drainage channels to ensure 100% operational continuity during extreme pluvial flooding or climate crises.
4. Digital Transformation and Connectivity: The project drives the extensive digitalization of hospital operations via an upgraded Hospital Management Information System (SIMRS) and enables the widespread adoption of cutting-edge medical technologies, such as telemedicine networks, to bridge regional health disparities across Indonesia.
5. Intra-Complex Connectivity and Disaster Mitigation: The project will improve the physical and logistical connectivity among the existing disparate wings, pavilions, and adjacent academic zones of the Faculty of Medicine, Universitas Indonesia (FKUI) through secure link-bridges and clear clinical corridors. Furthermore, all new buildings will be engineered with advanced seismic-resistance designs to reduce the risk of earthquakes and potential aftermaths, safeguarding patients and healthcare frontliners in a dense urban environment.

1.4 Scope of Works - Purpose of ESIA/ESMP

The scope of work of the Environmental and Social Impact Assessment (ESIA) for RSCM is to evaluate the potential environmental and social impacts of the project. Here are the purposes of ESIA:

- Informed Decision Making: To provide decision-makers with comprehensive information regarding the potential environmental and social impacts of the hospital project, facilitating informed choices.
- Enhance Community Well-Being: To ensure that the hospital contributes positively to the health and well-being of the local community by addressing health service needs and minimizing adverse effects.
- Regulatory Compliance Indonesian environmental laws and regulations, as well as international best practices in environmental and social management.

- Promote Public Health: To assess how the hospital can enhance public health outcomes in Jakarta, particularly in underserved areas, while minimizing any potential negative impacts.
- Foster Sustainable Development: To align the hospital project with sustainable development goals, promoting economic growth, social equity, and environmental protection in the region.
- Build Trust and Transparency: To foster trust and transparency between the hospital management, local communities, and stakeholders by involving them in the assessment process and addressing their concerns.

Objectives: The objectives of the Environmental and Social Impact Assessment (ESIA) in RSCM Hospital are designed to ensure that the hospital's development project and operations are environmentally sustainable and socially responsible. Here are the key objectives of the ESIA:

- Assessment of Environmental Impacts: To identify and evaluate the potential environmental impacts of the hospital's construction and operational activities, including air quality, water usage, waste management, and biodiversity.
- Social Impact Evaluation: To assess the social impacts of the hospital on the surrounding community, including effects on local health, accessibility to healthcare services, and potential changes in social dynamics.
- Mitigation Measures: To develop and recommend mitigation measures to minimize or eliminate identified negative impacts on the environment and community, ensuring that the hospital operates sustainably.
- Regulatory Compliance: To ensure that the hospital complies with relevant environmental laws, regulations, and standards, thereby avoiding legal issues and enhancing its reputation.
- Stakeholder Engagement: To facilitate stakeholder engagement and public participation in the assessment process, allowing for the incorporation of community concerns and feedback into the hospital's planning and decision-making.
- Sustainable Development Planning: To promote sustainable development practices within the hospital's operations, ensuring that environmental and social considerations are integrated into all aspects of planning and management.
- Monitoring and Evaluation Framework: To establish a framework for ongoing monitoring and evaluation of environmental and social impacts, allowing the hospital to adapt and improve its practices over time.
- Awareness and Capacity Building: To raise awareness among hospital staff, patients, and the community about the importance of environmental and social responsibility and to build capacity for implementing sustainable practices.

1.5 Methodology for ESIA

The preparation of the Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) follows a structured methodology that includes the following key steps:

1. Scoping and Initial Screening
   - Identification of project components and potential environmental and social risks.
   - Consultation with stakeholders to define the scope of the assessment.
   - Review of legal and regulatory requirements at the national and international levels.
2. Baseline Data Collection
   - Environmental Data:
     - Air and water quality assessments through sampling and laboratory analysis.
     - Noise and vibration monitoring using decibel meters.
     - Climate and meteorological data analysis from government agencies.
   - Social Data:
     - Socioeconomic surveys conducted through household questionnaires.
     - Stakeholder interviews and focus group discussions.
     - Land use and demographic studies using census data.
3. Impact Assessment
   - Identification of potential positive and negative impacts on the environment and communities.
   - Qualitative impact evaluation using risk assessment matrices.
4. Mitigation and Management Measures
   - Development of mitigation strategies to minimize adverse effects.
   - Preparation of an Environmental and Social Management Plan (ESMP) with clear implementation timelines and responsibilities.
   - Cost estimation for mitigation measures and monitoring programs.
5. Public Consultation and Stakeholder Engagement
   - Regular consultations with affected communities, government agencies, and NGOs.
   - Disclosure of findings through public meetings, reports, and digital platforms.
   - Incorporation of stakeholder feedback into project planning.
6. Monitoring and Reporting
   - Establishment of an environmental and social monitoring plan.
   - Periodic reporting on the implementation of the environmental and social mitigation measures.

1.6 Screening for Associated Facilities

Under AIIB's ESF, Associated Facilities (AF) are activities that are not included in the description of the project set out in the legal agreements governing the project but which, following consultation with the client, the bank determines are (a) directly and materially related to the project; (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not be carried out if the project did not exist.

a. To the extent the Client controls or has influence over the Associated Facilities, the Client is required to comply with the requirements of the ESP and applicable ESSs with respect to such facilities, to the extent of its control or influence; or (ii) if the Associated Facilities are financed by another MDB, bilateral development organization, or development finance institution, the

Bank may rely on the requirements of such other development partner in place of all or some of the requirements set out in the ESP and ESSs, provided that, in the Bank's judgment, such requirements do not materially deviate from what would otherwise be required under the ESP and ESSs.

b. If the Client does not control or have influence over the Associated Facilities, it identifies in the environmental and social assessment the environmental and social risks and impacts the Associated Facilities may present to the Project, as well as potential mitigation measures that are within the Client's control. The Client is required to demonstrate, to the Bank's satisfaction, the extent to which it does not exercise control or have influence over the Associated Facilities by providing details of the relevant considerations, which may include legal, regulatory, and institutional factors.

Under this project, AIIB is required to screen potential environmental and social risks and impacts of associated facilities. Based on the screening below, no associated facilities have been identified.

Table 2. RSCM Project Screening of Associated Facilities

No	Activities funded by others: Committed Investment by Other Financiers		Considered Associated Facilities (AF) when all three criteria are met			Conclusion
	Specific Investment that may be linked with RSCM Investment	**Financial Sources**	**Directly and materially related to the project**	**Carried out or planned to be carried out contemporaneously with the project**	**Necessary for the project to be viable and would not be carried out if the project did not exist**	
1	The demolition of 9 buildings including Central Pharmacy Warehouse, CMU 1 Building, Cathlab 3, MODC Building, Central Surgical Installation, PESC Building, Administration Building, Guest House and Incinerator and TPS	BLU / Provider / Contractor	The demolition of 9 buildings directly and materially related to reconstruction of Superblock RSCM	The demolition of nine buildings is scheduled for mid-2026, though this may be delayed until mid-2027, before the construction started	The demolition of nine buildings is required for the Superblock Project to proceed, paving the way for the construction of new buildings	Associated Facility

No	Activities funded by others: Committed Investment by Other Financiers		Considered Associated Facilities (AF) when all three criteria are met			Conclusion
	Specific Investment that may be linked with RSCM Investment	**Financial Sources**	**Directly and materially related to the project**	**Carried out or planned to be carried out contemporaneously with the project**	**Necessary for the project to be viable and would not be carried out if the project did not exist**	
2	The Revitalitation for additional inpatient rooms of Kanigara Building	BLU	The Revitalitation of Kanigara Building is directly and materially related to the reconstruction of Superblok RSCM	The Revitalitation of Kanigara Building is under construction in 2025	The revitalization of the Kanigara Building is necessary for the Superblock Project to proceed. This revitalization is linked to the Superblock Project, as the building will serve as the relocation site for services from the structure slated for demolition	Associated Facility

2. Project Description

This project is planned to construct four new buildings to improve the healthcare and education infrastructure in the RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) area. The four buildings to be constructed are Superblock 1, the Training Center, the Guess House, the Parking Building, and the Powerhouse.

The project is located in the existing hospital area, located in the center of Jakarta City, precisely on Jl. Pangeran Diponegoro No. 71. The hospital area is also crossed by the Ciliwung River. The Superblock 1 Building will be built on the existing hospital land, which was previously the area of the IPKT building, the Pharmacy Satellite Building, the former IPTB Building, the PESC Building, the PK Laboratory Room, and the MODC Room & Ar-Rahman Prayer Room. The Training Building will be built on land that was previously the administration building area.

2.1 Pre-Construction

The land for the Guess House Building is on land that was previously the shelter building and the TPS (Temporary Waste Collection Point) & incinerator. Demolition will be carried out for these buildings to provide land for the construction of new buildings as figure below.



Figure 4. Building Plans on the TRUST Project

Source: RSCM Masterplan, 2026

This modern hospital layout covers a total area of 145.202,72 m², representing a significant health infrastructure upgrade. The design balances vertical expansion with walkability, accessibility, and

human-centered architecture, setting a new standard for inclusive and resilient healthcare facilities in Indonesia.

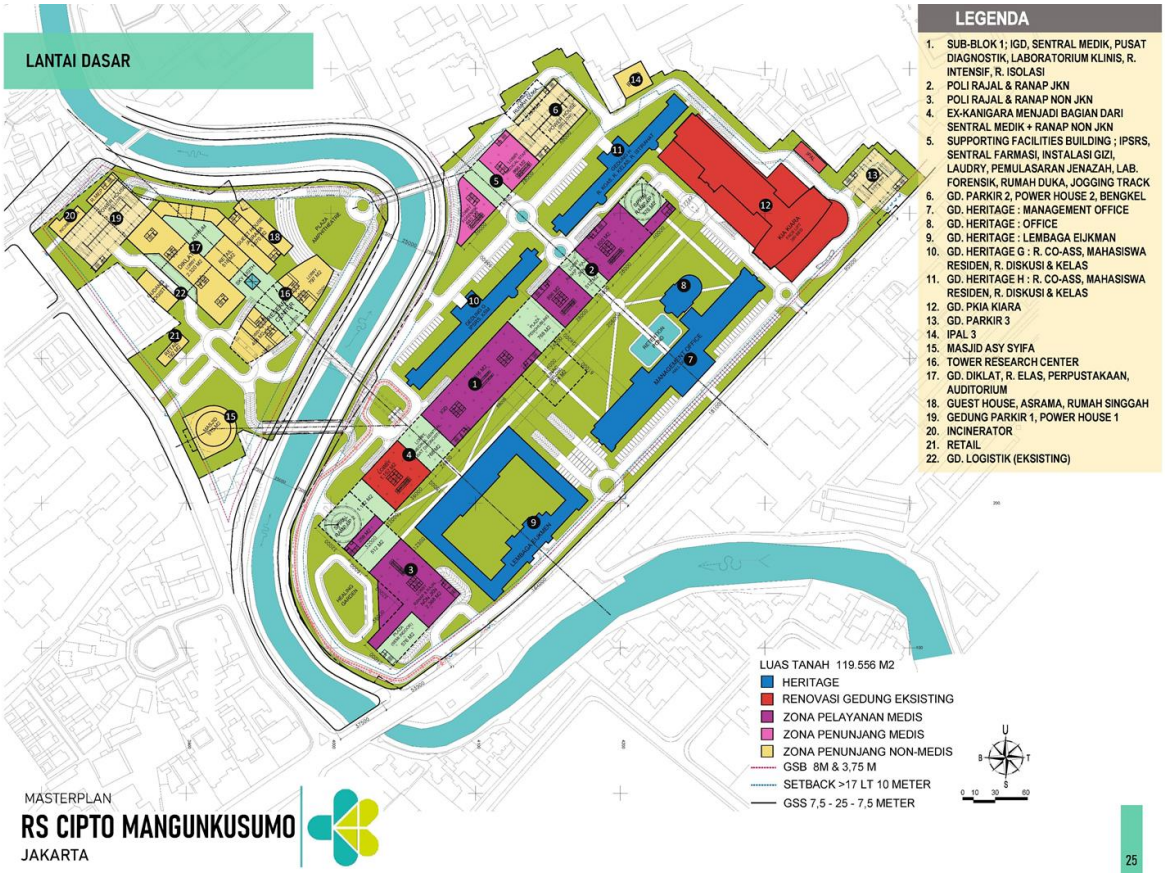


Figure 5. Masterplan of RSCM

Source: RSCM Masterplan, 2026

The design plan marks a major evolution from a fragmented layout to a cohesive, vertical, green, and accessible health complex. It anticipates future healthcare demand and integrates infrastructure for better service delivery, patient comfort, and staff productivity.

Table 3. Key Components of the Development RSCM on TRUST Project

No	Construction	Area (m²)	Service Functions
1	Superblock 1 Building (12 stories + 2 basement levels)	44.258	As a Central Medical Unit, Emergency, and Diagnostic Center: Emergency Department, Nuclear Medicine, Integrated Cardiovascular and Cerebrovascular Services (Operating Rooms, ICCU, CICU, HCU, Pediatric and Adult Inpatient Units), Cath Lab, Radiation Oncology, Radiology, Integrated Laboratory (Anatomical Pathology, Clinical Pathology, Microbiology), Integrated Procedure Room (IPR), Dialysis Center, Isolation (Airborne), Central Sterilization, Support Facilities: Pharmacy Satellite, LINAC Bunker, Wastewater Treatment Plant, and Parking
2	Training Center Building (9 stories + 2 basements)	33.454	As an Education and Training Center: Skill lab for competency testing / Simulation Center, Computer lab, training activity lecture hall, Student lecture hall, Student counseling room, Podcast room, Library, OSCE, Logistics room, Recording studio, Discussion room, Changing rooms (men's and women's), Student dormitory, Auditorium, Co-working space, Gym, and Parking lot
3	Guest House Building (9 stories + 2 basements)	19.800	Accommodations for training participants, patients' families, and others: Guest Rooms, Reception Desk, Fitness Center, Swimming Pool, Restaurant, Laundry, Prayer Room, Lounge, Basic Health Clinic, and Parking
4	Parking Garage & Power House (9 stories / 11 levels)	15.840	Vehicle Parking Lot, Power House, IPSPRS Workshop, IPAKK Workshop, Government Property Warehouse, Archives Warehouse, Cafeteria, Prayer Room, Waste Disposal Site (WDS), Driver's Break Room

Table 4. Schedule of Implementation Activities

No	Activity	Detail Activity	From	To	2026									2027											2028										
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Bluebook		Minister of Health	Bappenas																																
2	Commitment Lender		Bappenas	AIIB																																
3	ESIA & Amdal	ESIA Preparation	Consultant	RSCM																																
		ESIA Disclosure	RSCM	Bappenas																																
4	Appraisal Mission	Site Visit																																		
		Appraisal																																		
5	Any Relevant Studies	Soil Test	Consultant	RSCM																																
		KKOP Permit	Consultant	RSCM																																
6	Register of List of Activities		Minister of Health	Bappenas																																
7	Loan Negotiation		Minister of Finance	AIIB																																
8	AIIB Board Approval			AIIB																																
9	Advance Procurement		Minister of Health	LKPP																																
10	Loan Agreement		Minister of Finance	AIIB																																
11	Declaration of Effectiveness		Minister of Health	Minister of Labour, Minister of Finance, AIIB																																
12	Buildings Design																																			
13	Permitting																																			
14	Construction Tender																																			
15	Demolition																																			
16	Design & BoQ Approval																																			
17	Construction																																			
18	Medical Equipment																																			
19	Non-Medical Equipment																																			
20	Medical Support																																			
21	Human Capital Investment & Research																																			
22	Project Completion																																			

No	Activity	Detail Activity	From	To	2029												2030												2031											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Bluebook		Minister of Health	Bappenas																																			
2	Commitment Lender		Bappenas	AIIB																																			
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18	Medical Equipment																																						
19	Non-Medical Equipment																																						
20	Medical Support																																						
21	Human Capital Investment & Research																																						
22	Project Completion																																						

The pre-construction phase focuses on regulatory compliance, engineering surveys, and site preparation before active groundbreaking occurs. Key activities in this phase include:

- Permits and Clearances: Securing the environmental approval addendum (*Persetujuan Lingkungan*) and building approval (PBG) and executing detailed geotechnical soil boring tests.
- Stakeholder Socialization: Conducting public consultation and informational meetings with local authorities of Central Jakarta, the Senen District, Kenari sub-district, and neighboring RT/RW community networks.
- Site Clearance and Triage Logistics: Erecting high-barrier dust and acoustic fencing to isolate the development zone; conducting hazardous material audits (such as asbestos) in older structures designated for dismantling, and rerouting internal utility networks (electricity, water, fiber-optics) and patient pathways to maintain continuous 24/7 hospital operations.

2.2 Construction

Based on the RSCM Masterplan of the AIIB TRUST Project, the construction work phase 1 includes:

- Superblock 1: A 12-story construction with 2 basement levels, covering a ground area of 2,500 m^2. The building functioned as modern central medical unit diagnostic facilities, emergency, and parking.
- Training Center: A 9-story construction with 2 basement levels, covering a ground area of 2,300 m^2.
- Guest House
- Parking Facilities
- Powerhouse

All of these facilities will be financed by AIIB, therefore it is not considered as associated facilities (AF).

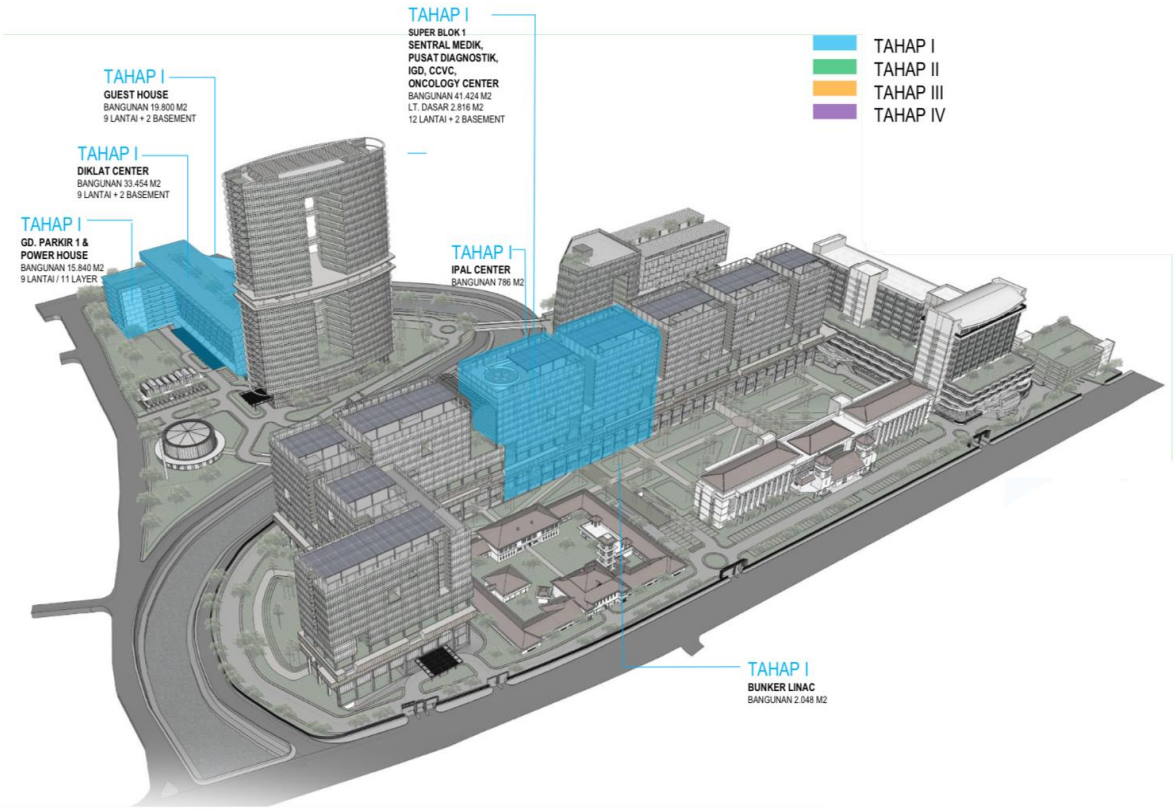


Figure 6. Construction Work of RSCM Phase 1

Source: RSCM Masterplan, 2026

The following structures are currently identified for demolition or replacement during Phase I redevelopment:

Table 5. Preliminary Assessment of Existing Structure

No.	Existing Structure	Preliminary Assessment
1	Central Pharmacy Warehouse	Existing medical support facility
2	CMU 1 Building	Existing medical support facility
3	Cathlab 3	Existing medical support facility
4	MODC Building	Existing institutional structure
5	Central Surgical Installation	Existing medical facility
6	PESC Building	Existing supporting structure
7	Administration Building	Existing supporting structure
8	Rumah Singgah	Existing supporting structure
9	Incinerator and TPS	Existing utility infrastructure

The demolition plan for 9 buildings located as shown on maps below.

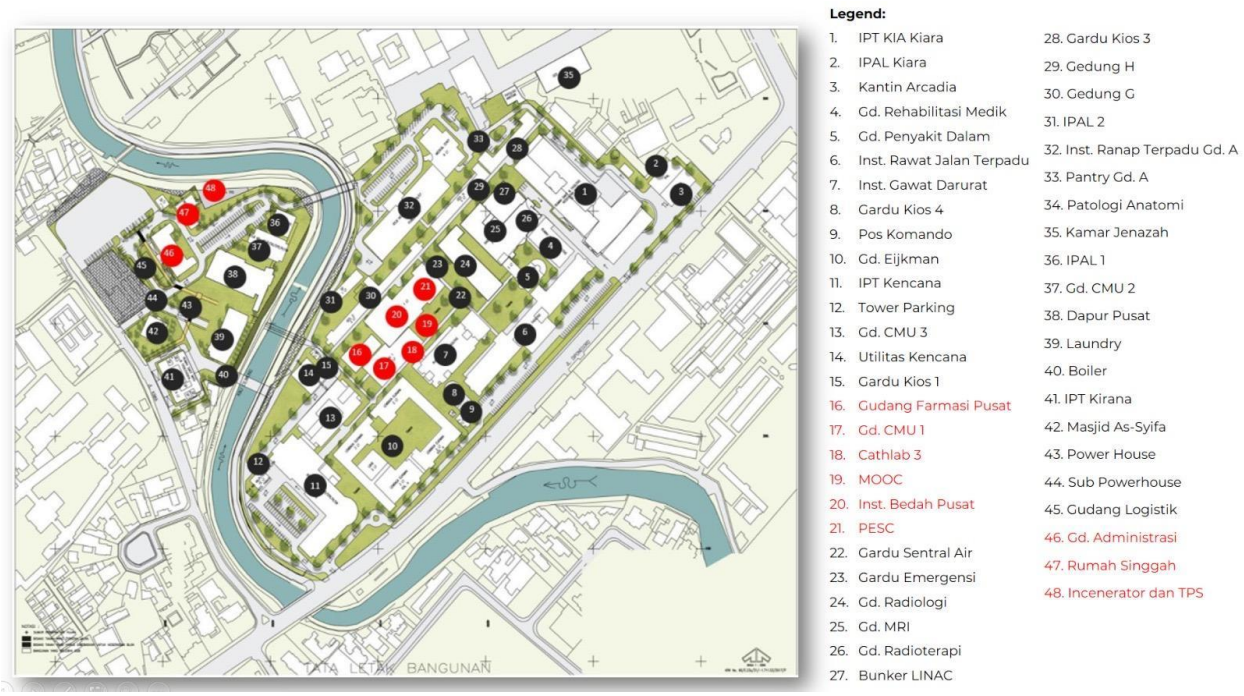


Figure 7. Demolition Plan

Source: RSCM Masterplan, 2026

The construction phase encompasses the core civil, structural, and infrastructure building works required to deliver the new vertical medical towers. Key activities in this phase include:

- Civil and Structural Works: Executing bored piling, deep foundation excavations, and structural superstructure erection (reinforced concrete and steel frameworks). Heavy machinery mobilization is strictly scheduled during off-peak hours to avoid blocking traffic on Jalan Pangeran Diponegoro.
- Mechanical, Electrical, and Plumbing (MEP) Installation: Integrating medical-grade HVAC ventilation networks equipped with HEPA filters for sterile zones, modernizing primary electrical substations with high-capacity backup diesel generators, and installing automated fire suppression systems.
- Environmental Infrastructure & Demobilization: Constructing a modernized, energy-efficient Extended Aeration Wastewater Treatment Plant (IPAL) and expanding the Temporary Hazardous Waste Storage (TPS B3) facility. This phase concludes with the demobilization of equipment, removal of temporary worker camps, and restoration of affected internal landscaping.

Phase 1: Preparation Phase The project initiates with the strategic construction of the new, modernized RSCM Powerhouse integrated with the Parking Building zone. This phase

acts as a critical bridging step, ensuring all essential utility lines and power distribution networks are fully operational before the older, legacy utilities are decommissioned.

Phase 2: Major Building Construction This phase marks the commencement of extensive structural works for the core backbone of the project, focusing on the initial segments of Superblok 1. Concurrently, structural foundations are laid to reconfigure access paths, ensuring that regular hospital operations and clinical intake zones remain completely unhindered by the surrounding heavy civil works. In this phase the contractor will begin setting up a worker base camp at the location designated by RSCM as shown in Figure below. Workers are assigned a specific area near the project site to ensure hospital services remain undisturbed. They are not permitted outside this designated area, thereby minimizing contact with hospital patients, visitors, and local residents.

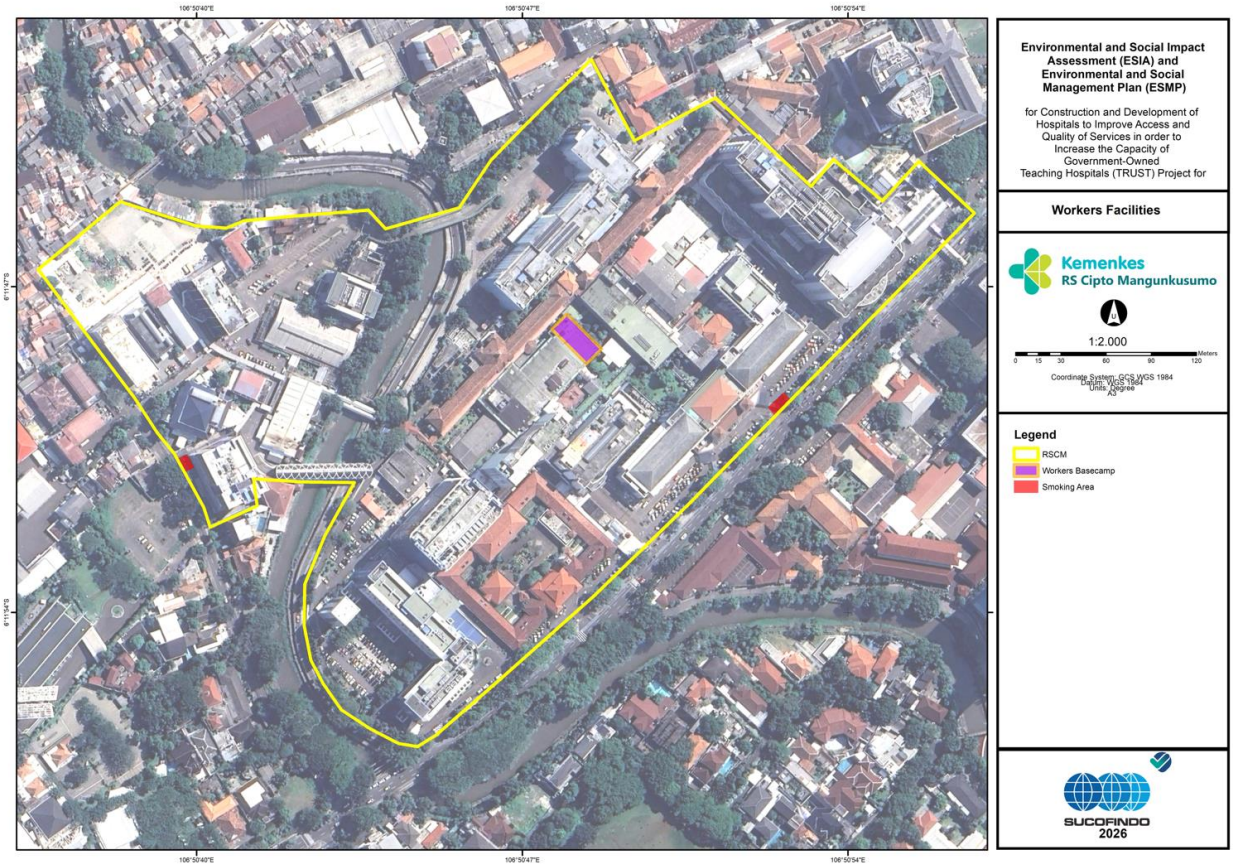


Figure 8. Workers Basecamp and Facilities

Phase 3: Hospital Function Migration and Planned Demolition as the first main wings of Superblok 1 near structural completion, clinical, administrative, and training functions will systematically migrate into these newly built, advanced facilities. Following a successful transition, the legacy structures—specifically the old Training Center and the Guest

House—will be decommissioned and systematically demolished to clear the footprint for subsequent construction wings.

Phase 4: Preparation for Further Expansion with the land footprint cleared from the demolition of the old Training Center and Guest House, intense site preparation and earthworks will commence. This stage focuses on stabilizing the alluvial urban soil and preparing the excavated zones for the remaining vertical extensions of the medical complex.

Phase 5: Superblok 1 Expansion and Connectivity Civil and structural works accelerate to complete the entire linear block of Superblok 1, significantly expanding RSCM's specialized healthcare capacity. To maximize internal efficiency, a dedicated hospital-user Sky Bridge network and an operational helipad (visible atop Superblok 1) will be integrated, alongside the revitalization of adjacent public plazas to optimize traffic flow around the Salemba-Diponegoro corridor.

Phase 6: Project Completion in this final phase, the complete modernization scheme reaches 100% completion. The old utility clusters (the legacy Powerhouse and Parking Building) are fully integrated into the new, highly efficient structures. RSCM emerges as a state-of-the-art apex referral hospital complex, featuring optimized accessibility, advanced green building infrastructure, and expanded capacity to serve national healthcare demands.

2.3 Operation

The operational phase represents the long-term functioning of the modernized hospital facility, delivering complex tertiary and quaternary healthcare. Key activities in this phase include:

- Clinical and Medical Services: Gradual activation of integrated vertical medical centers (including advanced surgery, intensive care units, and specialized wards) and the calibration of advanced diagnostic imaging and therapeutic equipment.
- Environmental Health Management: Continuous operation of the upgraded IPAL to ensure liquid effluent compliance, execution of strict point-of-origin color-coded medical and chemical waste segregation, and secure, traceable logistics for hazardous (B3) waste disposal via licensed third parties.
- Facility Maintenance & Safety: Implementing routine maintenance of HVAC systems, generator load tests, fire safety drills, and continuous enforcement of Hospital Occupational Health and Safety (K3RS) protocols to safeguard frontliners, patients, and visitors.

2.4 Post-Operation

While RSCM is a vital national asset intended to operate indefinitely, a post-operation and decommissioning framework is formally established to manage temporary project facilities or future structural closures. Key considerations in this phase include:

- Decommissioning of Temporary Construction Structures: Safe dismantling and recycling of temporary metal fences, offices, and staging structures used during the construction phase, restoring the land to permanent hospital use.
- Long-Term Structural Decommissioning Protocols: In the event that specific medical wings or outdated pavilions are retired in the future, strict decontamination protocols are mandated. This includes the secure mitigation of radiological hazards from radiology/radiotherapy equipment, neutralization of biological vectors in former infectious isolation wards, and environmentally responsible structural demolition in accordance with national building codes.

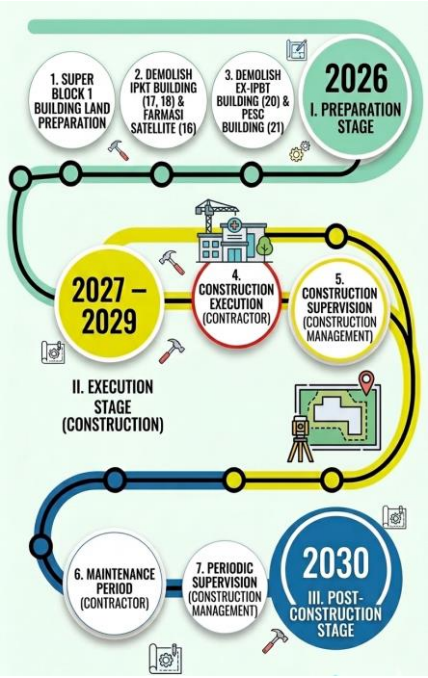


Figure 9. Roadmap of RSCM Phase 1 Development Project

2.5 Relocation Plan and Site Preparation

As part of the pre-construction phase for the development of Superblok 1 Building at Dr. Cipto Mangunkusumo Hospital (RSCM), the hospital management is required to execute land clearing and demolition of several existing structures. Consequently, a comprehensive Health Services Relocation Plan is established to guarantee the continuity of clinical services, diagnostic procedures, and operational support activities during the transition period. Site preparation requires the demolition of multiple facilities located within the Superblok 1 footprint. Based on the spatial layout and project planning, the affected buildings designated for demolition include (layout map in annex 7):

- IPKT Building (layout map nos. 17 and 18).
- Satellite Pharmacy Building (layout map no. 16).
- Ex-IPBT Building (layout map no. 20). PESC Building (layout map no. 21).

- Clinical Pathology (PK) Laboratory rooms (layout map no. 17).
- MODC Room & Ar-Rahmah Musalla (layout map no. 19).

To avoid disruption to patient care and maintain safety standards, physical service relocations will be carried out following the Joint Commission International (JCI) accreditation in October 2026. The relocation implementation is scheduled to span from November 2026 to June 2027 prior to the commencement of main civil works.
Key operational services and their relocation strategies include:

- **Integrated Heart Center (IPKT) at CMU 1:** Involves the relocation of outpatient clinics, procedure rooms, intensive care units (CICU, ICCU, HCU, SCU), general inpatient wards, cath lab, operating theaters (OK), and IPKT administration.
- **Hemodialysis (HD) Services at CMU 1:** Involves the extension/addendum of the HD Cooperation Agreement (KSO HD) (noting a formal postponement letter regarding KSO extension from the Directorate General of Health Services/Dirjen Keslan), relocation of IPT HIV Clinic to IPRJT Floor 5, renovation of the HD area at IPRJT Floor 4, and operational transfer of HD services.
- **Clinical Pathology Laboratory at CMU 1:** Key actions include preparing the Bill of Quantities (RAB) for the renovation at Eijkman Building, vendor coordination meetings, executing renovations at Eijkman Building, and transferring PK Laboratory (Floors 1 and 7), Integrated Lab Management, and Medical Lab Department to Eijkman Building. Additionally, donated and unowned medical equipment will be audited and processed.
- **Nutritional Services Unit (IPG):** A temporary two-story building will be constructed at the DSSG and RPK parking area. Floor 1 will house the receiving area, dry and cold storage, showers, and staff changing rooms, while Floor 2 will be designated for IPG management.
- **Pratama Clinic:** Will be relocated to the ICTEC Building.

Vendor Relocation and Livelihood Restoration Plan

1. Temporary and Permanent Relocation Sites
    - Temporary Allocation: During the construction of Superblock 1, eligible commercial vendors will be moved to a designated temporary site within RSCM premises that is safe and accessible to maintain their business continuity and income.
    - Permanent Allocation: Upon project completion, vendors will be relocated to a newly designated integrated commercial/canteen area managed under RSCM's Corporate Social Responsibility (CSR) program.
2. Eligibility and Selection Mechanism
    - Vendor identification and eligibility screening will be conducted in coordination with the local Sub-district (*Kecamatan*) and Ward (*Kelurahan*) heads prior to the cut-off date.
    - This collaborative approach ensures transparency while preventing unauthorized or informal street vendors from encroaching on the surrounding hospital perimeter.
3. Utility and Facility Provisions

RSCM should provide basic infrastructure for both temporary and permanent sites, including hygienic stalls, access to clean water, electricity connections, and routine waste management services.

3. Policy, Legal & Administrative Framework

3.1 National Legal Framework

3.1.1 Laws and Regulation Related to Environmental Management

1. Law No. 32 / 2009 on Environmental Protection and Management
2. Government Regulation No. 5 / 2021 related to Implementation of Risk-Based Business Licensing
3. Government Regulation No. 22 / 2021 related to Implementation of Environmental Protection and Management
4. Government Regulation No. 74 / 2001 related to Management of Hazardous and Toxic Materials
5. The Minister of Environment Regulation No. 22 / 2025 related to Authority to Issue Environmental Approvals
6. The Minister of Environment and Forestry Regulation No. 136 / 2024 related to Assignment of The Environmental Approval Process, which is a Central to Provinces and Regency/City Levels in Order to Support the Implementation of Business Licensing
7. The Minister of Environment and Forestry Regulation No. 4 / 2021 related to List of Businesses and/or Activities that are Required to Have an Environmental Impact Analysis, Environmental Management Efforts and Environmental Monitoring Efforts or a Statement of Commitment to Environmental Management and Monitoring
8. The Minister of Environment and Forestry Regulation No. 5 / 2021 related to Procedures for Issuing Technical Approval and Operational Feasibility Letters in the Environmental Pollution Control Sector
9. The Minister of Environment and Forestry Regulation No. 6 / 2021 related to Procedures and Requirements for the Management of Hazardous and Toxic Waste
10. The Minister of Environment and Forestry Regulation No. 11 / 2021 related to Emission Quality Standards for Internal Combustion Engines

3.1.2 Laws and Regulation Related to Facilities and Management Healthcare Waste Management

1. The Minister of Health Regulation No. 2 / 2023 related to Implementing Regulations of Government Regulation Number 66 of 2014 concerning Environmental Health
2. The Minister of Health Regulation No. 40 / 2022 related to Technical Requirements for Hospital Buildings, Infrastructure, and Health Equipment
3. The Minister of Health Regulation No. 18 / 2020 related to Medical Waste Management at Regional-Based Healthcare Facilities

4. The Minister of Health Decree No. HK.01.07/MENKES/537/2020 related to Guidelines for the Management of Medical Waste from Healthcare Facilities and Waste from Isolation or Self-Quarantine Activities in the Community in Handling Covid-19
5. Director General of Disease Prevention and Control Decree No. HK.02.02/C/1389/2024 related to Guidelines for Digital-Based Health Care Facility Waste Management

3.1.3 Laws and Regulation related to Man Power, Terms and Working Condition

1. Centralized AMDAL Authority: The AMDAL Review Commission has been abolished, shifting all document assessment responsibilities exclusively to central or regional government authorities.
2. Restricted Public Participation: AMDAL preparation now only involves directly affected individuals, eliminating the mandatory inclusion of environmental advocates and removing prior public disclosure requirements.
3. Altered Feasibility Decisions: Environmental feasibility is now determined directly by government assessment rather than an independent commission review, speeding up permits but potentially lowering transparency.
4. Loss of Legal Redress: The law removes the provision to revoke environmental permits through court rulings, eliminating a key legal avenue for communities to challenge harmful projects.
5. Weaker Environmental Oversight: Advocates warn that reduced community involvement, centralized evaluations, and limited accountability could severely weaken the AMDAL framework as a tool for environmental sustainability.
6. Informal Worker Protections: Social impacts on informal workers (e.g., street vendors) displaced by public land acquisition are managed through grants, relocation, and livelihood restoration.
7. Vulnerable Group Eligibility: To qualify for grant support, affected informal workers must prove continuous land use for at least 10 years, validated by either the land rights owner or the local village head.

3.1.4 Laws and Regulations Related to Prevention of Gender Based Violence

1. Law No. 12 / 2022 on Crime of Sexual Violence
2. The Minister of Manpower Decree No. 88 / 2023 related to Guidelines for the Prevention and Handling of Sexual Violence in the Workplace

3.1.5 Laws and Regulations Related to Occupational Safety and Health

1. Presidential Regulation No. 7 / 2019 on Occupational Diseases

2. The Minister of Manpower Regulation No. 11 / 2023 on Occupational Safety and Health in Confined Spaces
3. The Minister of Health Regulation No. 66 / 2016 related to Hospital Occupational Safety and Health
4. The Minister of Manpower Regulation No. 38 / 2016 on Occupational Safety and Health of Power Tools and Production

3.1.6 Laws and Regulations Related to Cultural Heritage

1. The Law of the Republic of Indonesia No. 11 of 2010 Concerning Cultural Heritage (*Undang-undang RI No 11 Tahun 2010*) states that an object, building, or structure may be proposed as a Cultural Heritage Object, Cultural Heritage Building, or Cultural Heritage Structure if it meets four criteria, one of which is that it has historical, scientific, educational, religious, and/or cultural significance. As a result, cultural historical assets must be kept and safeguarded from threats and/or disruption.
2. Government Regulation No. 1 / 2022 related to National Register and Preservation of Cultural Heritage
3. The Minister of Public Works and Public Housing Regulation No. 19 of 2021 related to Technical Guidelines for The Management of Preserved Cultural Heritage Buildings.
4. DKI Jakarta Governor's Decree No. 475 of 1993 (*SK Gubernur Provinsi DKI Jakarta Nomor 475 Tahun 1993*): This decree serves as the primary regional legal foundation for officially designating the main RSCM building in the Salemba area as a state-protected Cultural Heritage Building (BCB). Any physical changes to the buildings listed in this directive shall not harm the facade or the authenticity of the materials.
5. DKI Jakarta Governor's Decree Number 241 of 2022 (*SK Gubernur Provinsi DKI Jakarta Nomor 241 Tahun 2022*): This decree officially designates Eijkman Building as a state-protected Cultural Heritage Building.

3.2 International Standards & Regulations

3.2.1 AIIB's Environmental and Social Framework

Based on the AIIB Environmental and Social Framework 2024, the following three associated environmental and social standards (ESSs) need to be assessed to set out more detailed mandatory environmental and social requirements to be implemented, depending on the nature of the Project.

1. AIIB's Environmental and Social Standard 1 (ESS 1): Environmental and Social Assessment and Management

   The objective of ESS 1 is to achieve the environmental and social sustainability of projects and to support the integration of environmental and social considerations into the project decision-making process and implementation.

2. AIIB's Environmental and Social Standard 2 (ESS 2): Land Acquisition and Involuntary Resettlement.

   This Environmental and Social Standard (ESS) 2 aims to address the impacts of project-related land acquisition, including restrictions on land use and access to assets and natural resources, which may cause physical displacement (relocation, loss of land, or shelter) and/or economic displacement (loss of land or assets, or restrictions on land use, assets, and natural resources leading to loss of income sources or other means of livelihood).

3. AIIB's Environmental and Social Standard 3 (ESS 3): Indigenous People.

This Environmental and Social Standard (ESS 3) aims to ensure that projects respect the dignity, human rights, economies, and cultures of Indigenous Peoples, requiring free, prior, and informed consent (FPIC) under specific circumstances.

Based on the analysis of the three ESSs, Environmental and Social Standard (ESS) 1 applies to the project, as the project is going to have adverse environmental risks and impacts or social risks and impacts during project demolition, construction, and operation. Moreover, RSCM has cultural heritage buildings based on Governor of the Special Capital Region of Jakarta Decree No. 241 / 2022 regarding the designation of the Eijkman Molecular Biology Institute building as a cultural heritage building and Governor of the Special Capital Region of Jakarta Decree No. 475 / 1993 regarding the designation of historic buildings in the special capital region of Jakarta as cultural heritage objects including Faculty of Medicine, Universitas Indonesia (FKUI) / Geneeskundige Hoogeschool (GHS) and Rumah Sakit Cipto Mangunkusumo (RSCM) / Centrale Burgerlijke Ziekenhuis (CBZ). These two heritage buildings are located on Salemba Street 4-6 and Diponegoro Street No. 71 which is near the project area.

In this project, ESS1 will apply in a manner proportional to the project's environmental and social risks and impacts. The standard aims to ensure a high-quality environmental and social assessment and the effective management of risks and impacts through appropriate mitigation and monitoring measures throughout project implementation. Under this project, ESS 2 applies for the due diligence review of the relocation of tenants on the hospital buildings which will be constructed under the project. ESS 3 is also not relevant, as there is no presence of Indigenous Peoples in the project area.

3.3 Other International Legal Frameworks Applicable in Indonesia

Under the project, the following international legal frameworks are applied to ensure that the project meets good practices in environmental sustainability, occupational safety, and social responsibility.

1. World Health Organization (WHO) Guidelines
   The WHO Guidelines for Healthcare Facility Management provide best practices on:

- Medical Waste Management – Proper handling, treatment, and disposal of hazardous and infectious hospital waste.
- Infection Prevention and Control (IPC) – Measures to prevent hospital-acquired infections, including ventilation standards, personal protective equipment (PPE), and sanitation.

2. Paris Agreement on Climate Change
   As part of global efforts to combat climate change, the project considers sustainability measures aligned with the Paris Agreement, including:

   - Reducing carbon emissions from hospital operations.
   - Implementing energy-efficient technologies, such as solar panels and water recycling systems.

3. Basel Convention on Hazardous Waste
   The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal regulates the handling and disposal of medical waste to prevent environmental contamination.

4. World Bank Environmental, Health, and Safety (EHS) Guidelines
   These guidelines are used as a benchmark in projects financed by the World Bank and other international development institutions, particularly when national standards are absent or less stringent. Which covers:

   - Environmental: air emissions, wastewater, waste management, noise, resource efficiency.
   - Occupational Health & Safety: worker safety, emergency preparedness, hygiene, incident prevention.
   - Community Health & Safety: public safety, infrastructure risks, traffic, and hazardous material transport.
   - Construction and Decommissioning: pollution prevention, labor conditions, and safety standards for construction activities.

5. World Bank's Environmental and Social Standard 8 (ESS8: Cultural Heritage) .
   This ESS sets out general provisions on risks and impacts to cultural heritage from project activities. ESS8 recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present, and future. People identify with cultural heritage as a reflection and expression of their constantly evolving values, beliefs, knowledge, and traditions. Cultural heritage, in its many manifestations, is important as a source of valuable scientific and historical information, as an economic and social asset for development, and as an integral part of people's cultural identity and practice. ESS8 sets out measures designed to protect cultural heritage throughout the project life cycle.

6. International Labour Organization (ILO) Standards
   The project adheres to ILO conventions and guidelines that the Indonesian government has ratified to ensure fair labor practices, including:

- ILO Convention No. 155: Occupational Safety and Health (OSH) – Ensures safe working conditions for healthcare workers and construction laborers.
- ILO Convention No. 111: Discrimination (Employment and Occupation) –
- Prohibits discrimination in hiring, wages, and workplace policies.
- ILO Convention No. 102: Social Security (Minimum Standards) – Ensures proper social security provisions for workers.

7. ILO's C162 - Asbestos Convention, 1986 (No. 162)
   Indonesia has not ratified this convention.

3.4 Gap Analysis Between AIIB's ESF and Indonesian Legislation

Gap analysis has been carried out between AIIB's ESF and Indonesian relevant laws and regulations related to environmental and social regulations.

Based on the policy gaps, recommendations have been made in the table below.

Table 6. Analysis of Policy Gaps between AIIB's ESF and relevant Indonesian Laws and Regulations

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
ESS 1: Environmental and Social Assessment and Management			
Assessment and Management Process – ENVIRONMENTAL SCOPE			
Conduct environmental and social assessments to identify direct, indirect, cumulative and induced risks associated with the Project and impacts on physical, biological, socio-economic and cultural resources in the Project's area of influence	- Law Number 32 of 2009 concerning Environmental Protection and Management (Rules are no longer valid) - Government Regulation Number 22 2021 on Environment Protection and Management	Direct, indirect, and cumulative impacts are assessed within national regulatory frameworks. However, the requirements to identify and assess the risks and impacts caused by the project on physical, biological, socioeconomic and cultural resources Lack of requirements to define areas of influence and to apply	Induced risks (e.g. SEA/SH due to labour flows) have been identified and mitigation measures proposed in this ESIA/ESMP ESIA/ESMP defines project areas of influence to ensure E&S risks and impacts
Apply a hierarchical approach to mitigation in environmental and social assessments, by: (a) anticipating and avoiding risks and impacts; (b) where the avoidance is not feasible, minimizes or reduces the risk and impact to an acceptable level; (c) once	No explicit requirements About entering the mitigation hierarchy in the environment and social Management plan	Lack of requirements to adopt a mitigation hierarchy in the environment and social Management plan	The project will implement a mitigation hierarchy where identified risks and impacts will be avoided where possible. If avoidance is not possible, the risks and impacts minimize or reduce to an acceptable level. Risk avoidance

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
the risks and impacts have been minimized or reduced, mitigation; and (d) where residual risk or impact remains, compensation or balance thereof, if technically and financially feasible.			and E&S impacts will be explored both in the design and implementation of the project (construction stage).
Screening for Related Facilities	No requirements in national regulations	Lack of requirements	The project will screen for Related Facilities when the design is complete. If AF is found, AIIB's ES requirements will be applied to the extent possible
Conduct meaningful consultations with people affected by the Project and other stakeholders and facilitate their participation in consultations	- SK. Provincial Governor. DKI Jakarta No. 76/2001, concerning Operational Guidelines for Community Involvement and Information Disclosure in the EIA Process. - Government Regulation Number 22 of 2021 concerning Environmental Protection and Management	No gaps identified as the consultations of the stakeholders will be based on FPIC.	Meaningful consultations will be conducted on the basis of free prior consultations, and informed information for affected project stakeholders and interested stakeholders
Environmental Coverage			
Conduct a broad assessment of potential environmental risks and	- Law Number 32 of 2009 concerning Environmental	No gaps identified	

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
impacts, both positive and adverse, associated with the Project	Protection and Management (Rules are no longer valid) - Government Regulation Number 22 2021 on Environment Protection and Management		
Consider the Project's direct, indirect and cumulative impacts on biodiversity and ecosystem services, for example, habitat loss, disruption of migration routes or wildlife movements, degradation and fragmentation, invasive species, overexploitation, hydrological changes, nutrient loading, pollution, and incidental harvesting.	-	There are no direct and indirect impacts due to biodiversity and ecosystems.	-
Biodiversity Impacts Avoid the adverse impact of the Project on biodiversity. Biodiversity offsetting should be designed and implemented to achieve results that can reasonably be expected to result in no net losses and preferably net biodiversity gains	- Law (UU) Number 5 of 1994 concerning Biodiversity - Presidential Instruction (Inpres) Number 1 of 2023 concerning Biodiversity Conservation	No gaps identified	The project's biodiversity is an important impact in the environmental document and is implemented within the project site.
Pollution Prevention Implementing pollution prevention and control technologies and practices – consistent with international good	- Law Number 32 of 2009 concerning Environmental Protection and Management	No gaps identified	The project is consistent in the prevention and control of environmental pollution as the World Bank Group's Environmental,

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
practices, as reflected in internationally recognized standards, such as the World Bank Group's Environmental, Health and Safety (EHSG) Guidelines	- Government Regulation Number 22 2021 on Environmental Protection and Management		Health and Safety (EHSG) Guidelines
Medical management Garbage Medical Waste Management	- Law Number 18 of 2008 concerning Waste Management - Ministry of Environment and Forestry Regulation Number 19 of 2021 concerning Procedures for the Management of Non-Hazardous and Toxic Waste	Government Regulation No. 22/2021 classifies medical waste, which includes clinical waste with infectious properties, pharmaceutical products or expired chemicals, medical and laboratory equipment contaminated with infectious waste, and wastewater treatment sludge from hospitals, among others, as hazardous waste. This regulation stipulates that general hazardous waste must be handled in accordance with the provisions outlined in Government Regulation 22/2021 itself, with specific guidelines stipulated in the Regulation of the Minister of Environment and Forestry No. 6 of 2021 concerning Procedures and Requirements for	The project will ensure compliance with applicable medical waste regulations by: - Conduct an initial audit of existing medical waste management practices and infrastructure. - Provide capacity building and training to healthcare facility staff on the speakers, storage, treatment, and disposal of hazardous waste. - Support the establishment or upgrade of appropriate waste treatment facilities (e.g., increase capacity of wastewater treatment plant, temporary waste storage areas, and, amend partnerships with licensed third-party services to treat and dispose of the

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
		Hazardous Waste Management (called 'KLHK 6/2021') and the Ministry of Environment and Forestry Environment and Forestry Regulation No. 56 of 2015 concerning Procedures and Technical Requirements for the Management of Hazardous Waste from Health Care Facilities	increased volume of medical waste). - Implement a medical waste monitoring system with clear roles and responsibilities to ensure compliance with regulatory guidelines. - Regularly report on medical waste handling practices as part of the project's environmental monitoring framework - Provision of separate bins according to the characteristics of medical waste
Resource Efficiency. Implement technically and financially feasible measures to improve the efficiency of energy and water consumption, as well as material resources and other inputs	National regulations generally promote the reduction of resource consumption whenever possible. However, certain methods and standards are not explicitly Proposed		This project will be implemented technically and financially viable measures to increase efficiency in energy, water, and energy consumption. raw materials, as well as other resources, if possible. The project is committed to including energy efficiency as a Criteria for Evaluation of Bids in Selection equipment

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
Climate Change. Assess proposed projects in relation to climate change mitigation and adaptation	- Law Number 31 of 2009 concerning Climate Change	Although Law No. 31/2009 addresses climate change, project-level assessment requirements for climate change risk, adaptation and mitigation are not explicitly defined or uniformly enforced across sectors.	Integrate climate risk screening and adaptation planning into the initial project design. Require climate-related impact assessments as part of environmental and social assessments. Building the capacity of project implementers to use climate risk and resilience tools. Establish monitoring indicators related to climate adaptation outcomes.
Greenhouse gases. Assess alternatives under the Project, and implement technically and financially feasible and cost-effective options that support the Client in meeting their NDCs	- Presidential Regulation Number 98 of 2021: Implementation of Carbon Economic Value for the Achievement of Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development - Presidential Decree Number 14 of 2024: The Government of Indonesia's Efforts to Reduce Greenhouse Gas Emissions	While the Presidential Regulation supports GHG reduction and carbon economic value, there is a lack of clear guidance on estimating, reporting, and mitigating GHG emissions at the project level, especially for small- to medium-scale developments.	Conduct baseline GHG emissions assessments during project preparation. Identify and evaluate technically and economically viable alternatives with lower emissions. Integrate GHG mitigation measures in project design, such as improving energy efficiency or using renewable energy sources. Implement annual monitoring and reporting of GHG emissions in accordance with NDC targets.
Assessment and Management Process – SOCIAL SCOPE			
Vulnerable groups and discrimination. Assess social risks and impacts affecting vulnerable groups or individuals, and	- Law 2/2012 as amended in the Omnibus Law does not contain any special provisions on the protection of vulnerable groups in	There are no specific regulations within the national legal framework that require social risk	This project will identify and assess potential risks and social barriers that may disproportionately affect vulnerable groups. Social Impact

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
discrimination against groups or individuals in providing access to development resources and Project benefits, especially against vulnerable groups	the context of land acquisition for development in the public interest	assessments or prevention of discrimination in access to development resources and project benefits for vulnerable groups.	Assessments () will be conducted, and targeted outreach will be implemented to ensure the inclusion of these groups in the consultation and benefits of the project. Specific action plans will be developed, as needed, to avoid discrimination and promote equitable access.
Gender. Identify potentially adverse gender-specific risks and impacts of the Project that have a disproportionate impact on one gender compared to another, consider how the Project's risks and impacts may increase those gender-specific risks and impacts and develop mitigation measures to mitigate them. The risks associated with Gender-Based Violence, including Sexual Exploitation and Sexual Harassment/Harassment need to be screened in relation to potential labour flows.	**No requirements** in national regulations	National regulations do not mandate the identification or mitigation of gender-specific impacts of development projects.	The project will include gender analysis as part of the Environmental and Social Assessment (ESA) to identify gender-specific risks and impacts. Measures will be integrated into the project design to ensure gender equality, including targeted support, women's participation in consultations, and monitoring of gender-disaggregated data. Specifically ,will comprehensively address: i) Institutional gender gaps at hospital level (including representation and specialization disparities); ii) Gender-related challenges in healthcare service provision; iii) Integration of gender to risk management. Including

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
			ensuring fair labor, equal pay, gender-sensitive occupational health and safety, robust protection against GBV/SEAH, dedicated women-only consultation groups to inform project and building design, survivor-centric Grievance Redress Mechanism (GRM) The Gender Action Plan (GAP) will be prepared and implemented accordingly.
Cultural Heritage. Identify potential impact to cultural heritage buildings on project area due to demolition, excavating and earth works.	- The Law of the Republic of Indonesia No. 11 of 2010 - Government Regulation No. 1 / 2022 related to National Register and Preservation of Cultural Heritage - The Minister of Public Works and Public Housing Regulation No. 19 of 2021 related to Technical Guidelines for The Management of Preserved Cultural Heritage Buildings	No gaps identified	
HEALTH AND SAFETY			
Health and Safety of Workers and Communities.	- Government Regulation Number 50 of 2012 concerning the Implementation of Occupational	There are no specific regulations mandating to avoid or minimize	The project will implement a health and safety management plan that aligns with international best

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
Assess health and safety risks to Project workers and communities affected by the Project. For such workers and communities, implement measures to prevent accidents, injuries, and illnesses (including, as appropriate, measures to avoid or minimize exposure to infectious and non-communicable diseases, including pandemics) associated with the Project	Health and Safety Management System - Regulation of the Minister of Public Works and Public Housing Number 10 of 2021 concerning Guidelines for Construction Safety Management Systems - Government Regulation No. 30 of 2021 concerning Road Traffic and Transportation, includes traffic impact analysis (ANDALALIN) requirements for projects that have the potential to disrupt the security, safety, order, and flow of road traffic	potential public exposure to waterborne diseases, infectious and non-communicable diseases. The latest policies and regulations put in place by the Government of Indonesia have extensively covered the risks related to the spread of COVID-19 and have adopted social distancing and general hygiene measures.	practices, including the requirements of the AIIB's ESF and the relevant WBG EHS Guidelines. Specific measures will be included to assess and manage risks to workers and communities, including those related to waterborne diseases, infectious and non-communicable diseases (e.g., pandemics). The project will adopt proactive protocols for hygiene, social distancing (as relevant), community awareness, and infection prevention, especially during public health emergencies.
Occupational Health and Safety. In addition to the general provisions above, implement the following measures designed to provide safe and healthy working conditions to Project workers:	- Law Number 1 of 1970 concerning Occupational Health and Safety (OHS) Management - Regulation of the Ministry of Manpower Number 5 of 2018 concerning Occupational Health and Safety (OHS) Standards for Workers and the Work Environment - Regulation of the General Minister Manpower and Housing No. 10 of 2021 on Guidelines for	Current legal framework has discussed many ESS2 requirements on occupational health and safety	The project will continue to implement Occupational Health and Safety (OHS) measures in accordance with national regulations, while aligning with the requirements of the AIIB's ESS2 and relevant international standards such as the WBG Environmental, Health and Safety Guidelines. The measures will include regular safety training, use of personal protective equipment (PPE), routine health monitoring, emergency preparedness, and the

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
	Construction Safety Management System - Minister of Public Works and Public Housing Instruction No. 02/IN/M/2020 on Protocols to prevent the spread Coronavirus disease 2019 (COVID-19) in Construction Services		establishment of a worker safety committee to ensure safe
	-		Working conditions throughout the project lifecycle.
The entry of the workforce. Assess and manage the risk of adverse impacts on society that may result from the temporary labour flow caused by the Project. Where such risks may exist, apply the following principles to be applied by the Client: (a) seek to avoid or minimize labor flows by utilizing local labor whenever possible; and (b) assess and manage labour inflow risks (including the risk of disease transmission or GBV or sexual exploitation and harassment (SEA)) on appropriate instruments, depending on risk factors and their level	K3 regulations in Indonesia do not include SEA/SH risk prevention.	There is a gap	Prepare and implement a Workforce Management Plan and encourage Contractors to engage local workers for skilled and unskilled work. The risks of GBV, SEA/SH are addressed through a) training of project workers (especially contractor workers) on zero risk and tolerance, b) raising public awareness (especially for a) workers and b) community members in and around the construction site), c) signing of a Code of Conduct by project workers (especially Contractor workers).

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
Building Security. When the Project includes new buildings and structures accessible to members of the public, consider the additional risks of potential public exposure to operational accidents or natural hazards, including extreme weather events.	- Law No. 28 of 2002 concerning Buildings.	No gaps identified	Integrate building design risk assessments for natural hazards and operational accidents into the project planning process. Safety measures such as early warning systems, emergency exits, fire prevention systems, and climate-resistant features should be adopted in line with international best practices and AIIB requirements.
Traffic and Road Safety. Identify, evaluate, and monitor traffic and road safety risks for Project workers and affected communities during the Project Life Cycle, develop measures and plans to address them, and incorporate technically and financially feasible road safety components into the Project design, where applicable, to prevent and mitigate potential road safety impacts on affected communities	- Law Number 22 of 2009 concerning Road Traffic and Transportation	-	Develop and implement Traffic Impact Analysis and Management as part of the project
Security personnel. When a Project worker is assigned to provide security to protect Client's personnel and property (Project security worker), assess the risks posed by these security arrangements to people inside and outside the Project site.	No **requirements** in national regulations	There is a gap	Establish clear protocols for the selection, training, and supervision of security personnel

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
LABOR AND WORKING CONDITIONS			
Labor Management Relations. Provide a good labor management relations system for Project workers, which includes the following, consistent with relevant national legislation	- Law Number 11 of 2020 concerning Manpower - Law on Creation Number 13 of 2003 concerning Workforce - Law Number 20 of 2023 concerning State Civil Affairs Apparatus		The project will establish labor management procedures (LMPs) that are consistent with AIIB ESS2. This will include clear job requirements, a working grievance mechanism for workers, an anti-discrimination policy, and regular communication between workers and management.
Civil Servants. If government civil servants are employed in connection with the Project (either full-time or part-time) and they remain subject to the terms and conditions of existing public sector employment agreements and relevant national laws applicable to civil servants	No **requirements** in national regulations	National regulations do not provide specific guidance for civil servants working on externally funded projects; there are no provisions that ensure that ESS2 protections (e.g., equal treatment, access to complaints, health and safety) are extended to seconded or part-time civil servants.	The Project will ensure that civil servants involved in the Project are covered by the same manpower management and OHS measures as other workers, in line with AIIB ESS2. Their involvement will be documented, and they will be informed of their rights, responsibilities, and access to the Project's grievance redress mechanism.
Child Labor and Forced Labor Child Labor. To protect children from harm to their health, safety, and morale, take all necessary measures to prevent children under the age of 18 from	- Law Number 13 of 2003 concerning Manpower as amended by Law Number 11 of 2020 concerning Omnibus Law and Law	Employers are generally prohibited from hiring children under the age of 18. However, a child between the ages of 13	As this project is related to construction activities that pose fundamental risks related to health and safety in the workplace, persons under the age of 18 will not

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
being employed to work under the Project. Forced labor. Take all necessary measures in connection with the Project so that no work or services not performed voluntarily are demanded of a person under threat of violence or punishment	- Number 21 of 2007 concerning the Eradication of Human Trafficking has regulated the prohibition of the use of child labor and forced labor	and 15 can do light work, as long as the work does not interfere with physical, mental, or social welfare and development.	be involved in the execution of any project work
ESS 2: Land Acquisition and Voluntary Resettlement			
Loss of access to assets or resources or land use restrictions. If adverse environmental, social or economic impacts of Project activities involve loss of access to assets or resources or land use restrictions, identification of impacts to be avoided, or when avoidance is not feasible, at least minimized, reduced, or compensated, through environmental and social assessments	- Law Number 2 of 2012 concerning Land Acquisition for Development in Public Interest as amended by Law No. 6 of 2023 the amendment of the Job Creation Law - Government Regulation No. 39 2023 on Government Amendments - Regulation No. 19 of 2021 concerning Implementation of Land Acquisition for Development in the Public Interest Government Regulation No. 2 of 2015 concerning the Handling of Social Conflicts - Regulation of the Minister of ATR/BPN (MAA) No. 19/2021 concerning Technical	While existing regulations such as Law No. 2/2012 and related amendments provide a framework for land acquisition and social impact management, the emphasis is limited to identifying, avoiding, or minimizing partial or temporary restrictions on land use or access to resources, especially for informal users or vulnerable groups. Compensation will be provided to eligible people under Presidential Regulation No. 78/2023[5],	nprove screening processes to identify direct and indirect project impacts on land access and resource use, including those affecting informal users. Prioritize avoidance and minimization of impacts through initial project design and stakeholder engagement. Provide clear guidelines and mechanisms for grant support and/or livelihood restoration for all affected parties, not just legal landowners. Ensure an inclusive consultation process with those affected by land-use restrictions, especially

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
	Implementation of Land Acquisition for Development for the Public Interest - Presidential Regulation Number 62 2018 on Social Impact Handling in the Land Acquisition Process - Law No. 78 of 2023 Presidential Decree concerning Management of Social and Community Impacts in the Process of Land Acquisition for National Development Projects ~~eligibility for compensation of land ownership~~	which requires at least 10 years of continuous land use, done in good faith and recognized by the landowner or local village head. ~~This will be treated as a living document and Action Plan in the LARAP report.~~ S 2 provides requirements of affected peoples that need to be compensated regardless of land ownership, where at least livelihood is restored and living standard is improved.	vulnerable and marginalized groups. Monitor and evaluate the effectiveness of mitigation measures, with corrective actions taken as needed.
Grievance Compensation Mechanism appropriate Project-level GRM to receive and facilitate the resolution of concerns and complaints of people who believe they have been affected by the environmental or social impact of the Project, and to inform affected people of the availability of the Project	Employment-related complaints a**re managed through unions** or through mechanisms described in individual workers' contracts. Such mechanisms often do not allow anonymity and are likely inaccessible to contractors, subcontractor workers, part-time workers, and other vulnerable workers	National requirements for GRMs for employment-related issues have not ensured there are various channels through which workers can lodge their grievances conveniently and in a timely manner	Appropriate Project-level GRM to receive and facilitate the resolution of concerns and complaints of people who believe they have been adversely affected.

ESS AIIB	Indonesian Laws and Regulations	Gaps	Proposed Measures to Reduce the Policy Gap
Stakeholders engagement and Information Disclosure	- Law Number 14 of 2008 concerning Public Information Disclosure - Government Regulation Number 22 of 2021 concerning Environmental Protection and Management	The Public Information Disclosure Law Number 14 of 2008 also requires government agencies to provide information needed by the public, including planned activities, budgets and expenditures, and other data relevant to public understanding. Previous practice in the sector includes information disclosure and engagement processes, including managing the impact of access restrictions Public participation in the AMDAL process has been significantly reduced under the Job Creation Act, limiting public engagement.	The project will develop and implement a Stakeholder Engagement Plan (SEP) in line with AIIB requirements. The plan will outline strategies for meaningful consultations with affected communities and stakeholders throughout the project cycle, including mechanisms to disclose relevant project information in a timely and easily accessible manner. Particular attention will be paid to ensuring inclusive engagement, especially where national regulations limit participation, such as in the EIA process. The project will also establish a feedback mechanism and grievance redress to manage community issues and ensure accountability.

Presidential Regulation No. 78/2023 is not fully applicable in this case because the affected vendors do not meet the eligibility criteria. Based on field verification, the vendors have not occupied or utilized the land continuously for at least 10 years, as required under Article 5. Additionally, the vendors' use of the land has not been formally recognized or justified by the landowner or local village authorities. Therefore, this will be based on the AIIB ESS 2, where the compensated will be provided regardless of land ownership.

4. Environmental Baseline Conditions

4.1 Environmental Conditions

4.1.1 Climate and Meteorology

Jakarta City, which has a tropical environment influenced by monsoon winds, is the administrative location of the RSCM project plan. The two primary seasons in this area are the rainy season (September–February) and the dry season (March–October), according to secondary data from the closest meteorological station (BMKG).

In this ESIA research, meteorological conditions surrounding the project site are critical, especially when examining dust dispersion and exhaust emissions during construction and when designing the building's drainage system to reduce the risk of floods. Additionally, the evaluation of patient thermal comfort and energy efficiency (Green Building) will be based on temperature and humidity parameters.

Table 7. Climate and Meteorological Data in Central Jakarta

Month	Average Rainfall (mm)	Min. Average Temp. (°C)	Max. Average Temp. (°C)	Average Temp. (°C)	Humidity (%)	Max. Wind Speed (m/s)
January	538,60	25,22	31,77	28,08	80,06	4,58
February	262,20	25,42	31,50	28,09	81,07	4,14
March	104,40	25,63	32,54	28,79	78,06	4,19
April	158,80	25,69	32,65	28,80	78,37	4,20
May	136,40	26,52	33,12	28,29	77,33	3,72
June	129,30	26,16	32,82	29,07	76,42	3,85
July	219,60	25,67	32,82	28,63	73,46	3,77
August	112,95	25,89	32,99	28,76	72,84	4,26
September	122,60	26,32	33,27	29,07	72,38	4,30
October	135,25	26,67	34,00	29,87	70,77	4,40
November	152,65	26,26	33,54	29,19	73,60	4,62
December	278,95	25,81	32,16	28,37	77,69	4,45

Source: Indonesian Agency for Meteorology, Climatology, and Geophysics, Kemayoran Observation Station 2024-2026

Historical data from the Kemayoran Observation Station was analyzed, from 2024-2026, showing the rainfall trend that occurred in the Jakarta Area, where the rainy months occurred from September to February, while March to October was relatively dry with an average monthly rainfall below 200 mm/month.

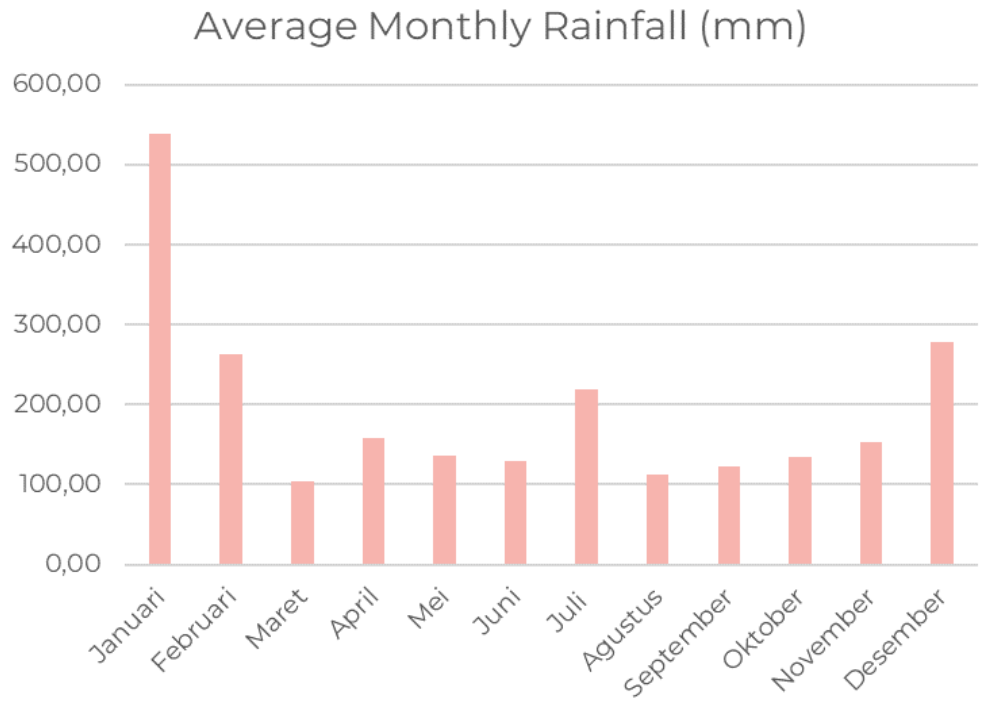


Figure 10. Average Monthly Rainfall in Central Jakarta

Source: Indonesian Agency for Meteorology, Climatology, and Geophysics, Kemayoran Observation Station 2024-2026

According to preliminary statistics, the predominant wind direction in Jakarta City is east to west during the dry season and north-west to south-east during the rainy season. Based on Climate and Meteorological Data in Kemayoran Station, Central Jakarta, The wind direction blows to the southeast with an average speed ranging between 3.6 - 5.7 m/s and a maximum speed in the range of 5.7 - 8.8 m/s.

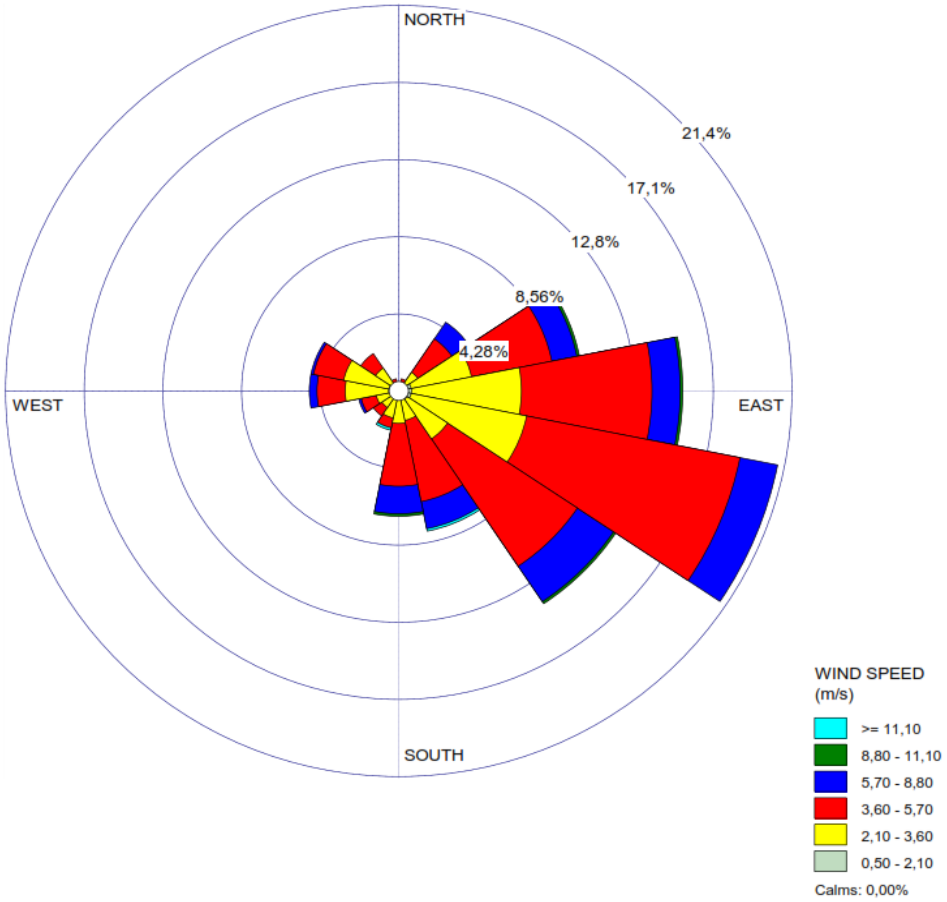


Figure 11. Wind Direction in Station Kemayoran 2024-2026

Flow Vector: Blowing To
Source: Indonesian Agency for Meteorology, Climatology, and Geophysics, Kemayoran Observation Station 2024-2026

Link to ESIA

The rainfall data is useful for contractors when carrying out construction in the project area, as well as being a consideration for the potential for high rainfall which in turn can cause potential flooding around.

In order to successfully reduce the effects of construction dust on inpatient regions, this data will be utilized in air quality modeling to identify the locations of ambient air monitoring sensors (downwind points).

4.1.2 Natural Disaster Risk

RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) is located in the Kenari sub-district of Senen, Central Jakarta. The hospital complex, which is located in a densely populated, low-lying alluvial plain, is vulnerable to natural disasters unique to Jakarta's Special Capital Region. As a vital national referral hospital, ensuring structural integrity and operational continuity during a natural catastrophe is crucial for supporting public health emergency responses.

Hydrometeorological disasters are the most prevalent type of disaster, with 2,489 incidents per year (96.8%) (BNPB). Floods are the most frequent type of hydrometeorological disaster in Indonesia, primarily caused by global climate change. Floods affect most areas in Indonesia, especially in large cities, including Jakarta Province. More than 50 flood incidents occurred in Jakarta Province from 2016 to 2020. The Regional Disaster Management Agency (BPBD) reported that in the past 10 years, there have been 8,333 flood disasters, with the highest peak in 2020 (Mutmainah, 2024).

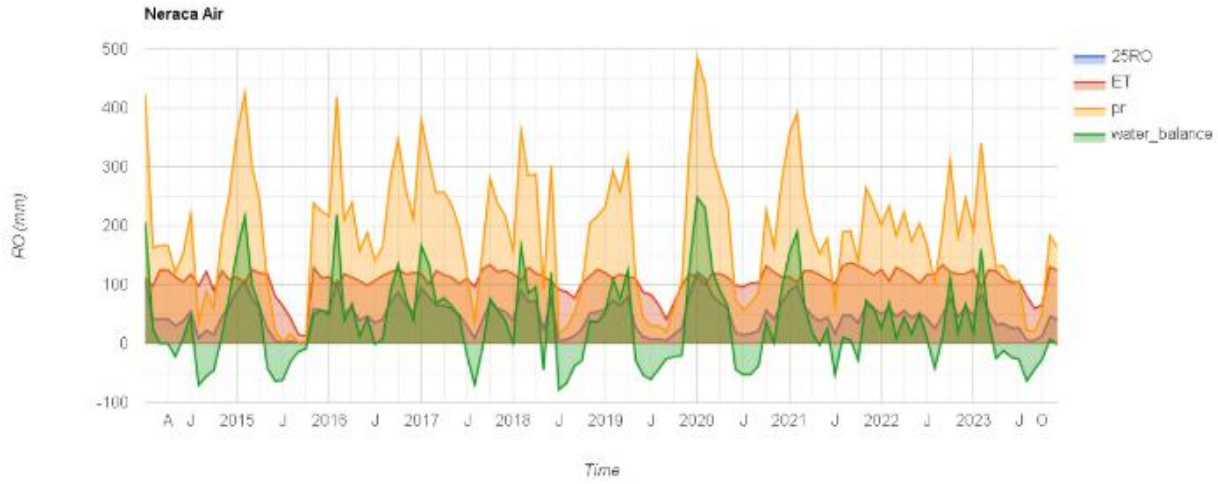


Figure 12. Water Balance 2014-2024

Source: Mutmainah on MAPID, 2024

Based on the figure above, the highest rainfall intensity in January is reinforced by Jakarta's monsoon rainfall pattern, with peaks occurring in December, January, and February. Rainfall intensity was a key factor in the 2020 Jakarta floods. Flooding in the Jakarta area can also be exacerbated by several factors, including topography, land subsidence, sea level rise, land conversion, and the impact of socio-economic growth (Mutmainah, 2024).

Table 8. Hydrology and Flooding Risks Data

Flood Type	Current Risk Level	Future Risk Level	Contributing Factors
Fluvial Flooding	Moderate	High	Land subsidence, urban expansion
Pluvial Flooding	Moderate	High	Increased heavy rainfall
Earthquake	High	High	Soil and Rock TYpe
Storm Surge	Low	Low	Inland location, no direct coastal exposure

Source: AIIB RSCM Swiss Report, 2026

1. Flood Risk (Moderate Vulnerability)

    - Central Jakarta is especially vulnerable to seasonal floods as a result of strong monsoonal rainfall, fast urban growth, and inadequate soil infiltration capacity. RSCM is quite close to significant urban water channels, such as the Ciliwung River basin network.
    - Impact Analysis: Heavy rains can cause localized flash floods or considerable surface water inundation along access routes such as Jalan Pangeran Diponegoro and its surroundings. This might result in significant traffic jams, preventing ambulance access and the arrival of crucial medical personnel or supplies.
    - Mitigation Measures: Hospital buildings are physically constructed with raised basements and ground floors (about +0.50 meters above the surrounding road level) to protect key clinical spaces and power equipment from water infiltration. To quickly remove interior water accumulations, the facility maintains a network of micro-drainage channels, retention sumps, and autonomous submersible pumps.

2. Seismic / Earthquake Risk (High Vulnerability)

    - Although Jakarta is not situated on a major active fault line, it is susceptible to far-field seismic waves from the active Sunda Megathrust zone or active land faults in West Java (such as the Baribis or Cimandiri fault zones).
    - Impact Analysis: High earthquakes can cause structural vibrations, fear among patients and visitors, damage to non-structural elements (such as suspended ceilings and glass panels), and disturbance of sensitive medical equipment in radiology, critical care, and surgical units.
    - Mitigation Measures: All modern multi-story medical towers and retrofitting structures in the RSCM complex are built to meet Indonesian seismic structural standards (*SNI Tata Cara Perencanaan Ketahanan Gempa untuk Struktur Bangunan Gedung*). Medical equipment, heavy gas cylinders, and chemical racks in laboratories are structurally anchored to prevent tipping during seismic movements.

3. Extreme Weather and Climate Change Risks (Low to Moderate Vulnerability)

    - Climate change forecasts predict a rise in the frequency of extreme weather events in Jakarta, such as severe thunderstorms, microbursts (high-velocity localized winds), and protracted heatwaves.
    - Impact Analysis: Strong winds may cause damage to temporary roof structures, signs, and mature trees in the hospital courtyard, perhaps blocking emergency exits. Heatwaves exacerbate the urban heat island effect, increasing the cooling demand on HVAC systems and increasing the risk of thermal discomfort or heat stress in sensitive individuals.
    - Mitigation measures include regular structural evaluations of roofs, outside facades, and overhead installations. The hospital's landscaping is routinely maintained, and trees are pruned to minimize wind-induced falls. Critical zones like operation theaters, isolation rooms, and pharmaceutical storage require redundant cooling chillers and powerful backup HVAC systems.

4. Emergency Preparedness and Business Continuity Plan (BCP)

    To handle these natural hazards, RSCM operates under a comprehensive Hospital Disaster Plan (HDP) and a robust Business Continuity Plan (BCP) designed to guarantee uninterrupted medical services:

    - Disaster Command Center: During an emergency, a centralized command system is activated to handle internal logistics, patient triage, and external evacuation if needed.
    - Utility Redundancy: Equipped with high-capacity emergency backup diesel generators with enough fuel to run life-support systems for many days.
    - Water: Massive clean water reservoirs (*ground water tanks*) and alternative deep-well water supply systems to ensure water availability if municipal water lines (*PAM*) fail due to an earthquake or flood.
    - Evacuation Routes and Drills: Disaster evacuation routes are well designated, assembly sites (*titik kumpul*) are located in open courtyard spaces, and medical and security personnel participate in routine simulation drills to guarantee prompt action during real-world catastrophes.

Table 9. Water Resources and Availability

Parameter	Current Condition	Future Condition (2050-2080)	Remarks
Water Supply Security	Moderate	High Risk	Increasing drought frequency
Drought Frequency	Moderate	Severe	Water conservation needed
Flood Contamination Risk	High	Very High	Need for advanced filtration

Source: AIIB RSCM Swiss Report, 2026

Link to ESIA

- Infrastructure and Flood Resilience: The trend of high-intensity monsoonal rainfall necessitates that the ESIA assess internal drainage capacities and physically elevate critical utilities (such as backup generators and the IPAL) to ensure 100% hospital operational continuity during urban pluvial flooding.
- Climate Adaptation and Patient Safety: Rising urban temperatures and high relative humidity force the ESIA to evaluate energy-efficient central HVAC networks and medical-grade HEPA filtration systems, assuring stringent indoor infection control and constant thermal comfort for vulnerable patients.

4.1.3 Ambient Air Quality

The ambient air quality and noise levels at RSCM are significantly affected by traffic on Pangeran Diponegoro Street, which is a busy arterial route in Jakarta. Furthermore, the operation of hospital infrastructure, including generators, boilers, and internal traffic, contributes to the existing air quality.

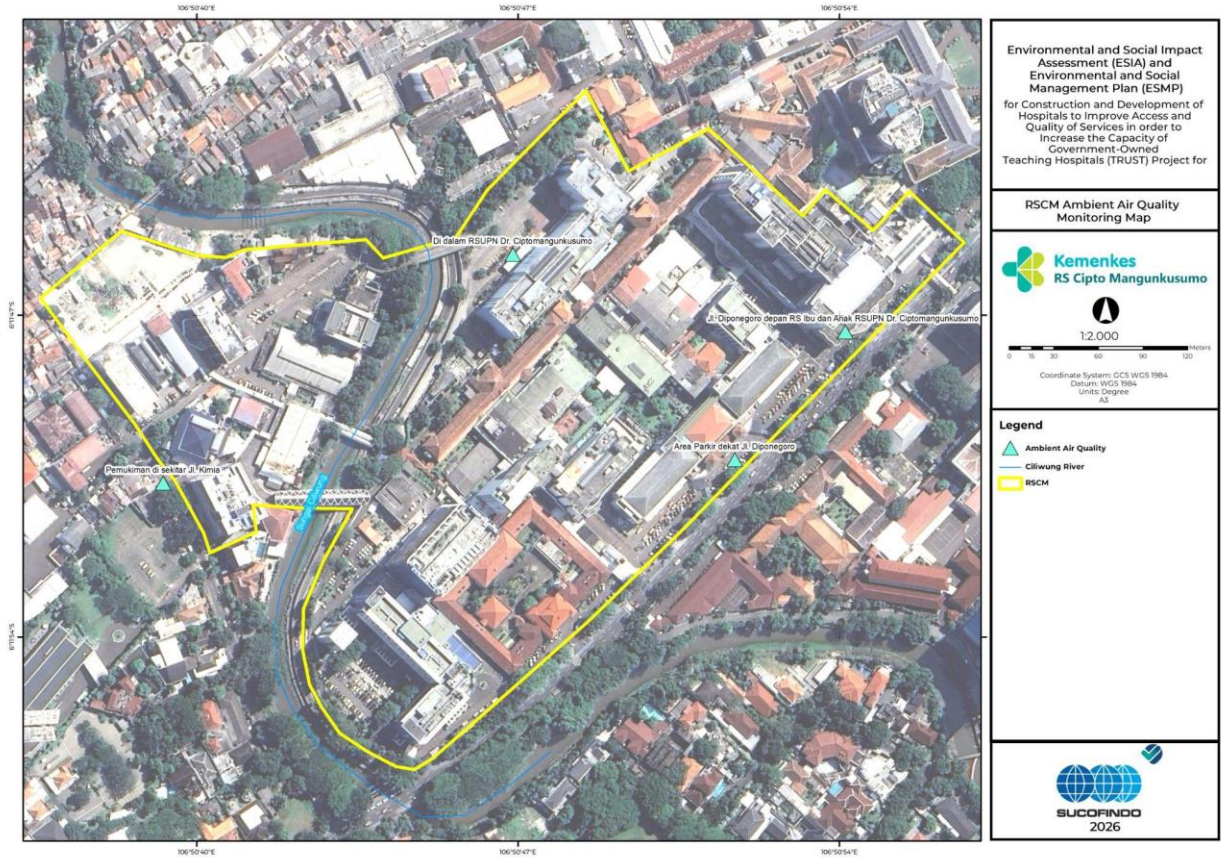


Figure 13. Ambient Air Quality Monitoring Location

Because the planned construction of the four new buildings would need heavy machinery and substantial material mobilization, air quality and noise characteristics are important indicators in this ESIA assessment. Increased noise and dust concentrations (TSP/PM10) could interfere with patient comfort and medical staff concentration in the nearby treatment facilities.

According to the RKL-RPL monitoring report document, a number of key locations were used for air quality monitoring. The parameters that were measured and updated in the ESIA study are summarized as follows.

Table 10. Baseline Air Quality Data

No	Parameters	Unit	Quality Standards*	2025								2026				Analysis Method
				Result Semester 1				Result Semester 2				Result Semester 1				
				Diponegoro Street Parking Lot	Diponegoro Street	RSCM	Kimia Street	Diponegoro Street Parking Lot	Diponegoro Street	RSCM	Kimia Street	Radiology Pathology Area	ICTEC Area	BRI dan CMU Area	Administration Area (Bazaar Location)	
	Meteorological Data															
1	Temperature	°C		28	29	29,6	30	29,4	28,4	29,7	29,6	25-33	25-33	25-33	25-33	
2	Relative Humidity	%		72,4	68,7	65	70,5	66,7	5965	68,4	68,6	57-90	57-90	57-90	57-90	
3	Air Pressure	mmHg		760	759	760	760	760	760	758	758	-	-	-	-	
4	Wind Speed (Average)	m/s		0,9	0,9	0,8	0,8	0,4	0,4	1,1	1	0,5-20 km/h	0,5-20 km/h	0,5-20 km/h	0,5-20 km/h	
5	Wind Speed (Lowest)	m/s		0,2	0,1	0,4	0,4	0,1	0,1	0,5	0,7	-	-	-	-	
6	Wind Speed (Highest)	m/s		2,1	2,1	1,2	1,2	0,7	0,7	1,8	1,4	-	-	-	-	
7	Wind Direction	-		Southwest	Northwest	West	Southwest	East	Southeast	Southeast	West	Dominan From North West	Dominan From North West	Dominan From North West	Dominan From North West	
8	Weather	-		Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	-	-	-	-	
	Ambient Air Quality															
1	Sulfur Dioxide (SO_2)	µg/N m³	150/1 Jam	52	60	48	44	54	56	66	68	29,8	30,7	31,9	32,9	SNI 7119.7:2017
2	Carbon Monoxide (CO)	µg/N m³	10000/1 Jam	<1146	<1146	<1146	<1146	<1146	<1146	<1146	<1146	951	1008	1103	1351	IKM-ENV-104 (Direct Reading) & PO/CLG-LK/54
3	Nitrogen Dioxide (NO_2)	µg/N m³	200/1 Jam	27	31	14	16	16	16	16	14	15	16,5	17,5	18,8	SNI 7119.2:2017
4	Photochemical Oxidants (Ox), such as Ozone (O_3)	µg/N m³	150/1 Jam	21	25	23	23	17	18	19	20	14,3	15,3	15,7	16	SNI7119.8:2017

No	Parameters	Unit	Quality Standards*	2025								2026				Analysis Method
				Result Semester 1				Result Semester 2				Result Semester 1				
				Diponegoro Street Parking Lot	Diponegoro Street	RSCM	Kimia Street	Diponegoro Street Parking Lot	Diponegoro Street	RSCM	Kimia Street	Radiology Pathology Area	ICTEC Area	BRI dan CMU Area	Administration Area (Bazaar Location)	
5	Non-Methane Hydrocarbons (NMHC)**	µg/Nm³	160/3 Jam	<6,53	<6,5370	<6,53	<6,53	<6,53	<6,53	<6,53	<6,53					Gas Kromatografi
6	Total Suspended Particles (TSP)	µg/Nm³	230/24 Jam	75	70	73	71	73	71	72	73	-	-	-	-	SNI 7119.3:2017
7	Particulate Matter (PM10)	µg/Nm³	75/24 Jam	35	34	36	34	33	32	33	31	40	43	48	52	SNI 7119.15:2016
8	Particulate Matter <2.5 (PM2.5)**	µg/Nm³	55/24 Jam	22	20	25	26	24	23	26	27	18	20	22	24	SNI 7119.14:2016
9	Lead, Pb	µg/Nm³	2/24 Jam	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	0,3	0,4	0,5	0,6	SNI 7119.4:2017
10	Dust	µg/Nm³	230	-	-	-	-	-	-	-	-	92	95	104	119	SNI 7119.3 - 2017
11	Ammoniac (NH_3)	ppm	2	-	-	-	-	-	-	-	-	Below 0,02	Below 0,02	Below 0,02	Below 0,02	SNI 19-7119.1 - 2005
12	Hydrogen Sulfide (H_2S)***	ppm	0,02	-	-	-	-	-	-	-	-	Below 0,002	Below 0,002	Below 0,002	Below 0,002	MASA 701, third edition 1988

**Air Quality Level Standards, PPRI No. 22/2021, Appendix VII On Air Pollution And Control*

*** Not Accredited KAN LP-516-IDN*

****Exclude scope of Accreditation KAN*

Sources : RSCM Measurement data, Syslab, 2025

Link to ESIA

- Patient Infection Control: High vehicular baseline emissions, coupled with construction dust, pose serious respiratory dangers to immunocompromised patients, prompting the ESIA to require stringent isolation barriers and medical-grade HEPA filtration.
- Urban Emission Compliance: To guarantee compliance with DKI Jakarta ambient air regulations, the ESIA must impose tight emission mitigation measures (such as low-sulfur gasoline and routine maintenance) on construction machinery and high-capacity backup diesel generators.

Future Requirements & Methodology (ESIA Phase Requirements): To meet AIIB and World Bank Group EHS Guidelines, the environmental team will undertake the following steps:

1. The latest measurements were taken in June 2026 at four monitoring points: the Radiology and Pathology Area, the ICTEC Area, the BRI and CMU Area, and the Administration Area (Bazaar Location).
2. Vibration Assessment: Considering that this project is located in a hospital environment that has sensitive medical equipment (such as MRI/CT Scan), vibration baseline data is required to prevent damage to medical equipment due to construction activities
3. Gap Analysis Standards: Comparing measurement results with national standards (GR. 22/2021) and international standards (WHO Air Quality Guidelines) according to AIIB requirements

4.1.4 Noise & Vibration

Given its strategic location in the high-density urban core of Central Jakarta, RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) is continuously exposed to elevated baseline ambient noise, primarily generated by intense multi-modal traffic along Pangeran Diponegoro Street and Salemba Raya Street. During the upcoming modernization and vertical integration project, the execution of pre-construction and construction activities—such as building demolition, bored piling, excavation, and heavy machinery mobilization—will temporarily generate acute, localized noise and structural vibrations.

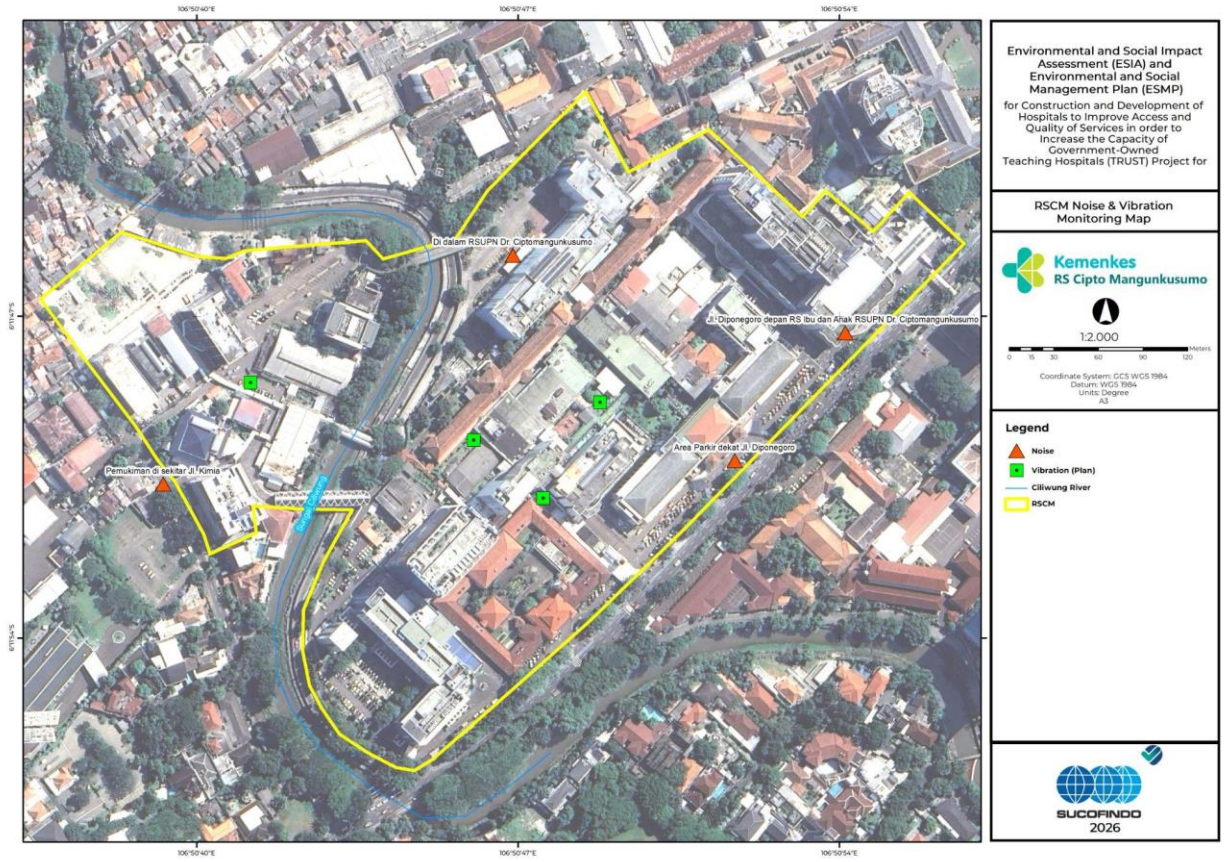


Figure 14. Noise & Vibration Monitoring Location

Managing these acoustic and mechanical impacts is exceptionally critical because the project occurs within a live, active national referral hospital complex. Excessive noise can disrupt patient recovery in adjacent inpatient wards and impair the focus of medical teams during delicate surgical operations. Furthermore, structural vibrations pose a severe threat to RSCM's advanced medical infrastructure. The hospital houses highly sensitive diagnostic and therapeutic technologies—including Magnetic Resonance Imaging (MRI) scanners, Computed Tomography (CT) systems, linear accelerators (LINAC) for radiotherapy, and high-precision microsurgery equipment—which require absolute structural stability to function without calibration errors or operational misalignments.

Vibration observations were conducted within the RSCM area and located close to the planned project area. This was done to obtain baseline data on current vibrations, to assess the potential vibrations during construction caused by heavy equipment on surrounding buildings, especially cultural heritage buildings located close to the planned project area.

To ensure strict environmental control, continuous monitoring will be carried out at sensitive internal and external receptor sites. The detailed baseline parameters, regulatory threshold limits, and monitoring frameworks for ambient noise and structural vibration at RSCM are explained in the table below:

Table 11. Noise Regulatory Thresholds and Monitoring Framework Matrix

Year	Parameters	Noise	Noise Level (Day-Night), (L_{sm})	Noise Level (Day), (L_s)	Noise Level (Night), (L_m)
	Analysis Method	SNI 9427:2016 & SNI 8427:2017	SNI 9427:2017	SNI 9427:2017	SNI 9427:2017
	Quality Standdards	55	55 (+3)		
	Unit	dB (A)	dB (A)	dB (A)	dB (A)
	Location	**Result**			
2024 (Semester 1)	Parking Kiara	55,4	-	-	-
	IPRJT Entrance	54,6	-	-	-
	Parking Building A	53,5	-	-	-
	Kimia Street	53,3	-	-	-
2024 (Semester 2)	Parking Kiara	52	-	-	-
	IPRJT Entrance	52,4	-	-	-
	Parking Building A	53,4	-	-	-
	Kimia Street	53,3	-	-	-
2026 (Semester 1)	Diponegoro Street Parking Area	-	54,6	53,9	50,7
	Diponegoro Street (in front of RSCM)	-	54,5	53,4	51
	Radiology Pathology Area	59	-	-	-
	ICTEC Area	61	-	-	-
	BRI dan CMU Area	62	-	-	-
	Administration Area	64	-	-	-

Source : RKL-RPL Report 2024 & RSCM Measurement data, Syslab & Sucofindo, 2026

**) Noise Level Standards, Decree No. 48/MENLH/11/1996*

Exceeding the Quality Standards

Table 12. Results of Vibration Measurements In The Hospital Area

No	Location	Unit	Quality Standards	2026	Analysis Method
				Semester 1	
1	Radiology Pathology Area	m/s²	4	0,8	SNI 7054-2019
2	ICTEC Area	m/s²	4	0,6	SNI 7054-2019
3	BRI dan CMU Area	m/s²	4	0,5	SNI 7054-2019
4	Administration Area (Bazaar Location)	m/s²	4	0,7	SNI 7054-2019

**Noise Level Standards, KepmenLH No. 05/2018*
Source : RSCM Measurement data, Sucofindo Laboratory, 2026

Link to ESIA

- Clinical Operations Protection: Excessive noise and structural vibrations from building demolition or bored piling can disturb patient recovery and decrease surgical accuracy, prompting the ESIA to require rigorous acoustic curtains and daytime-only construction scheduling.
- Heavy equipment vibrations pose a direct danger to the calibration of RSCM's high-precision diagnostic systems (such as MRI and CT scanners), thus the ESIA must implement non-impact piling methods and real-time telemetry vibration monitoring.

- Construction-generated vibration may result in micro-cracking, foundation settlement, structural instability, or destabilization of heritage buildings located near the construction zones. If vibration levels approach or exceed the allowable threshold, immediate corrective actions shall be implemented, including the temporary suspension of heavy equipment operations within the affected area until vibration levels return to acceptable limits.

4.1.5 Water Quality

The hydrological conditions at RSCM include systems for disposing of household and medical wastewater, clean water management, and groundwater management. Protecting groundwater quality and the city's drainage system from stormwater runoff is crucial because of the hospital's location in a heavily populated urban region.

The main goal of this ESIA research is to make sure that the construction of the four buildings won't increase the pollution load on receiving water bodies or interfere with groundwater movement because of the deep foundation. In order to reduce reliance on groundwater and PDAM, water sustainability elements will be assessed through the application of green building ideas (such as rainwater harvesting or water recycling).

The groundwater quality observation location is around RSCM at a distance of approximately 500 meters to 1 kilometer.

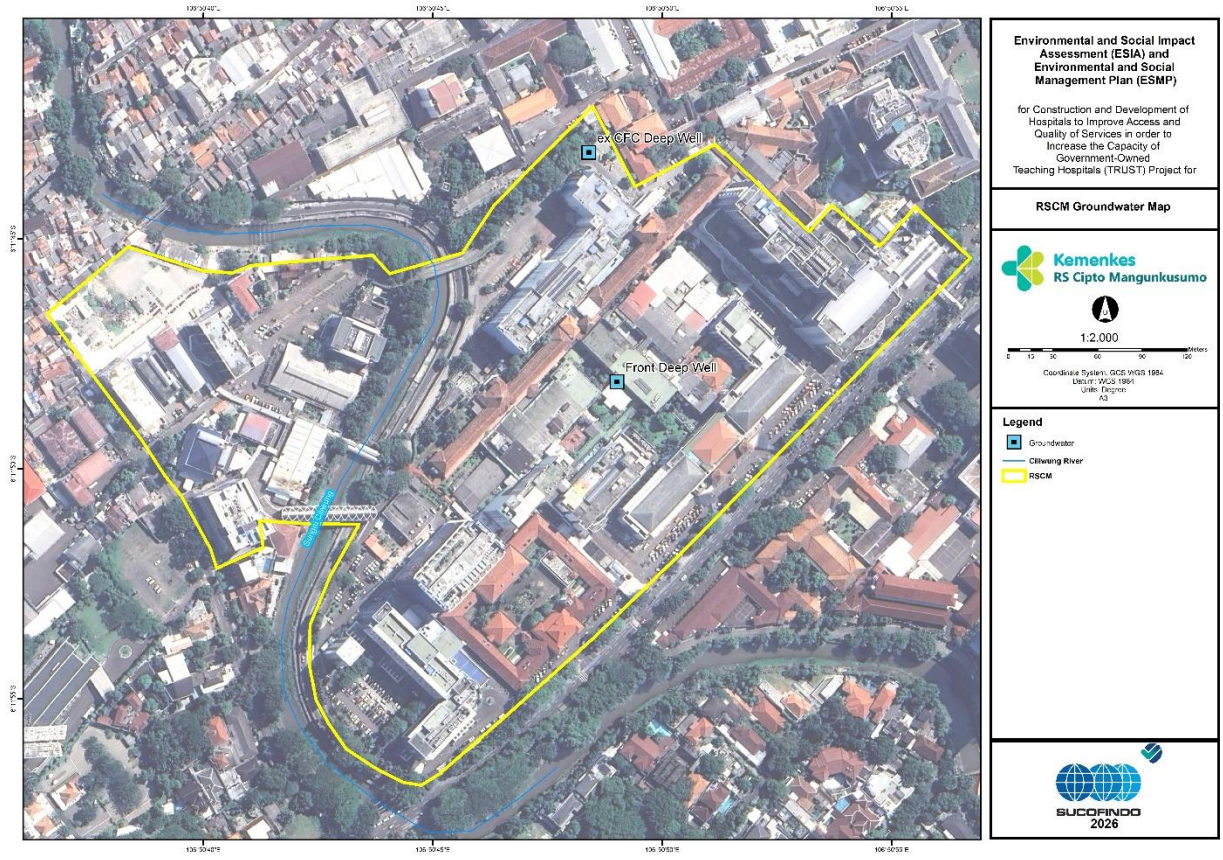


Figure 15. Ground Water Quality Monitoring Location

Based on the Liquid Waste Disposal Permit document (2019/2021), RSCM currently operates three main wastewater treatment units with the following compliance points:

Table 13. Water Quality Test Result

No	Parameter	Unit	Quality Standards	Method	Result 2024
1	Escherichia Coli	CFU/100ml	0	ISO 9308-1:2014	0
2	Total Coliform	CFU/100ml	0	ISO 9308-1:2014	0

Sources : RSCM Measurement data, BB Binomika Kemenkes, 2025

Water Quality Baseline (Summary from RKL-RPL Monitoring 2023-2025) include physical, chemical, and microbiological parameters (especially E. coli and total coliform), which are monitored periodically according to the 2023-2025 RKL-RPL Implementation Report (Table 13).

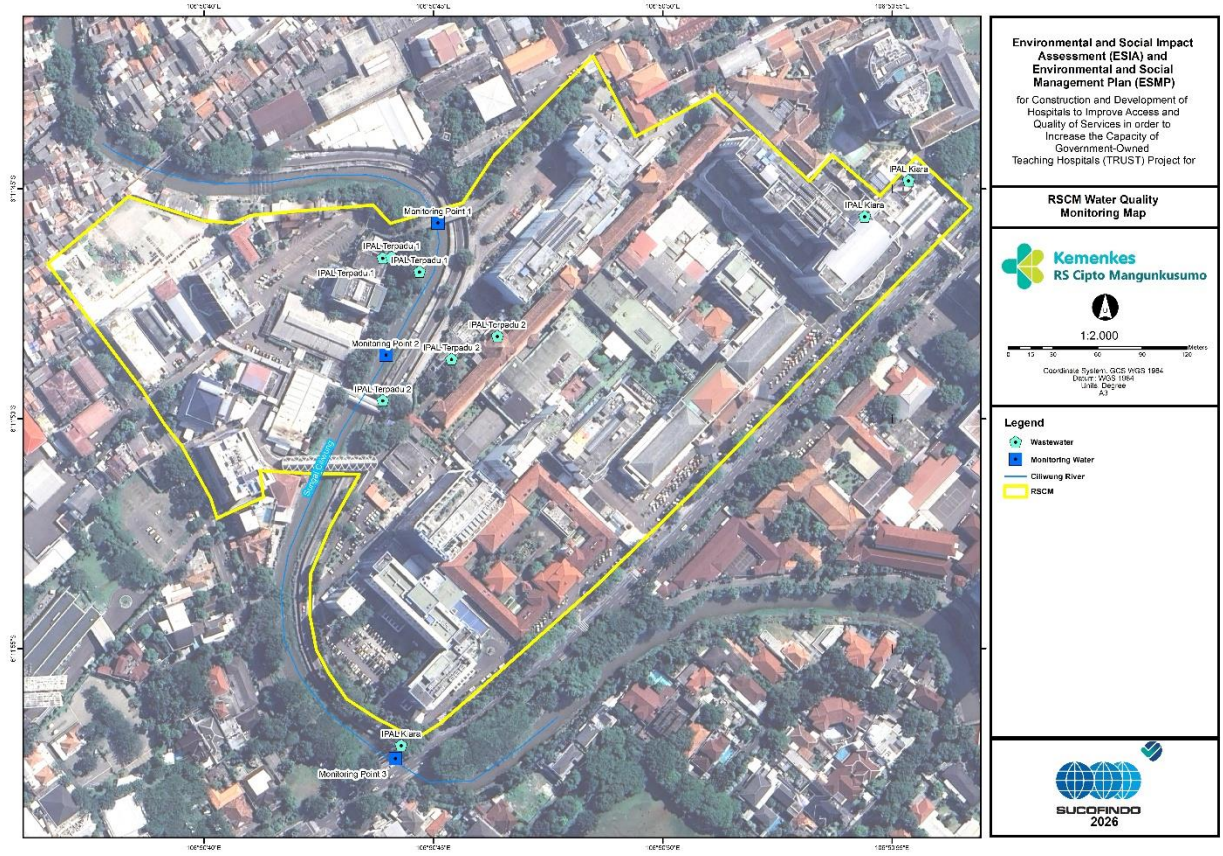


Figure 16. Water Quality Monitoring Location

Table 14. Groundwater Quality Monitoring Parameters

No	Parameters	Unit	Quality Standards #)	Result		Analysis Methode
				Deep Well Ex CFC	Deep Well Depan	
	Microbiology					
1	Eschercia Coli	CFU/100 mL	0	0	0	ISO 9308-1 : 2014
2	Total Coliform	CFU/100 mL	0	21	0	ISO 9308-1 : 2014
	Physics					
1	Odor	-	Odorless	Odorless	Odorless	IK/5.3/Mtd14a.13 (Organoleptik)
2	Turbidity	NTU	<3	1	18	IK/5.3/Mtd07a.09 (Nephelometri)
3	Temperature	°C	Air temperature ± 3	22,3	22,3	IK/5.3/Mtd18a.14 (Elektrometri)
4	Total Dissolved Solids	mg/L	<300	127	152	IK/5.3/Mtd23a.10 (Potensiometri)
5	Color	TCU	10	0,7	<0,38	IK/5.3/Mtd23a.05 (Spektrofotometri)
	Chemical					
1	Iron (Fe) (dissolved)	mg/L	0,2	0,24	0,25	SM APHA 23rd Ed. 3125 B, 2017
2	Hexavalent chromium ($Cr6^{+}$) (dissolved)*)	mg/L	0,01	<0,006	<0,006	SM APHA 23rd Ed. 3030 B dan 3500-Cr B, 2017
3	Manganese (Mn) (dissolved)	mg/L	0,1	0,06	0,9	SM APHA 23rd Ed. 3030 B dan 3125 B, 2017
4	Nitrate (as NO_3) (dissolved)	mg/L	20	1	0,3	IK/5.3/Mtd11a.05 (Spektrofotometri)

No	Parameters	Unit	Quality Standards #)	Result		Analysis Methode
				Deep Well Ex CFC	Deep Well Depan	
5	Nitrite (as NO_2) (dissolved)	mg/L	3	<0,05	0,01	IK/5.3/Mtd12a.05 (Spektrofotometri)
6	Lab pH	-	6,5-8,5	8	8,1	IK/5.3/Mtd13a.10 (Potensiometri)

Sources : RSCM Measurement data, Balai Besar Biomedis dan Genomika Kesehatan, 2026

#) Quality standards are based on Regulation of the Minister of Health of the Republic of Indonesia No. 2 of 2023 concerning Implementing Regulations for Government Regulation No. 66 of 2014 on Environmental Health

**) Tidak Terakreditasi ISO/IEC 17025 : 2017*

Exceeding the Quality Standards

Based on the results of water quality tests conducted in April 2026 at two different clean water sources, it can be seen that several parameters namely turbidity, iron, and manganese at the front deep well site still exceed the established quality standards, whereas at the former CFC deep well site, only the iron level exceeds the quality standards. However, the other test parameters remain below the quality standards.

Table 15. Wastewater Quality Monitoring Parameters

		Total Suspended Solids (TSS)	Amonia	pH	Oils and Fats	MBAS	BOD5	COD	Total Coliforms	Fecal Coliform
Quality Standards		30	10	6,0-9,0	5	-	30	100	3000	1000
Analysis Method		UP.IK.21.01.07 (Spektrofotometri)	SNI 06-6989.30-2005	SNI 6989.11:2019	SNI 6989.10-2011	SNI 06-6989.51-2005	SNI 6989.72-2009	SNI 6989.2:2019	APHA Ed. 23rd 9221.A, B, dan C-2017	SM APHA 24th Ed. 9221.A, C, E, 2023
Month	**IPAL**	**Result 2025**								
January	**1**	12	<0,03	7	<1,6		7	33	2300	-
	2	12	0,5	6,4	<1,6		12	49	2700	-
	Kiara	<2	<0,03	7	<1,6	<0,02	4	18	360	-
February	**1**	<2	0,07	7	<1,6	<0,02	8	41	1500	-
	2	<2	2	7	<1,6	-	6	31	<1,8	-
	Kiara	28	<0,03	7	<1,6	-	8	33	1500	-
March	**1**	8	0,18	7,4	<0,54	-	7,12	30,5	0	-
	2	7	3,94	7,3	<0,54	-	5,68	23,6	400	-

		Total Suspended Solids (TSS)	Amonia	pH	Oils and Fats	MBAS	BOD5	COD	Total Coliforms	Fecal Coliform
	Kiara	11	<0,03	7,3	<0,54	-	7,92	126	1800	-
April	**1**	<2	<0,03	7	<1,6	<0,02	9	43	<1,8	-
	2	16	2	7	<1,6	-	13	60	2300	-
	Kiara	10	0,2	7	<1,6	-	9	45	2700	-
May	**1**	<2	0,5	7	<1,6	<0,02	11	56	150	-
	2	<2	0,2	7	<1,6	-	12	37	<1,8	-
	Kiara	<2	0,3	7	<1,6	-	9	43	2700	-
June	**1**	10	0,98	7,8	0,66	-	2,89	25	5500	-
	2	2	8,62	7,4	0,59	-	3,2	13	0	-
	Kiara	6	5,95	7,7	0,65	-	6,08	33	16000	-
July	**1**	3	4	8	<1,6	<0,02	5	25	680	-
	2	<2	9	7	<1,6	-	4	22	<1,8	-
	Kiara	<2	9	7	<1,6	-	3	16	2700	-
August	**1**	-	-	-	-	-	-	-	-	-
	2	<2	9	7	<1,6	-	4	20	<1,8	-

		Total Suspended Solids (TSS)	Amonia	pH	Oils and Fats	MBAS	BOD5	COD	Total Coliforms	Fecal Coliform
	Kiara	5	9,8	7	<1,6	-	2	12	2100	-
September	**1**	7	11,74	7,6	<0,54	0,07	6,78	45	24000	-
	2	12	13,03	6,6	<0,54	-	2,18	9,4	1700	-
	Kiara	47	0,33	6,7	<0,54	-	10,14	44	2600	-
October	**1**	19	0,6	8	<1,6	<0,02	9	39	-	43
	2	6	0,6	7	<1,6	<0,02	5	27	-	<1,8
	Kiara	7	<0,03	8	<1,6	<0,02	6	30	-	910
November	**1**	<2	<0,03	8	<1,6	<0,02	4	21	-	<1,8
	2	20	<0,03	7	<1,6	<0,02	12	51	-	<1,8
	Kiara	7	<0,03	8	1,6	<0,02	3	15	-	680
December	**1**	<2	0,1	7	<1,6	<0,02	8	41	-	40
	2	29	6	8	<1,6	0,01	16	69	2300	-
	Kiara	9	0,22	7,8	0,54	-	1,83	52	10000	-

Sources : RSCM Measurement data, PT Unilab Perdana & Regional Environmental Laboratory, 2025

Based on results for 2025 (Table 15), the wastewater quality generally satisfies the physical and chemical requirements, with TSS, pH, and BOD5 levels all safely meeting established regulatory standards. However, there were two sampling points where ammonia levels exceeded the regulatory standard and one point where the COD level was 126 mg/L. Furthermore, the water suffers from a severe microbiological crisis, as the total coliform count skyrockets significantly past the permitted limit of 3,000. This heavy biological contamination renders the water unsafe in its current state, highlighting an urgent need for targeted disinfection and wastewater management to address the bacterial source.

Table 16. Surface Water Quality Monitoring Parameters in 2025

No	Parameters	Unit	Quality Standards*	Result						Analysis Method
				Semester 1			Semester 2			
				Monitoring Point 1	Monitoring Point 2	Monitoring Point 3	Monitoring Point 1	Monitoring Point 2	Monitoring Point 3	
	Physics									
1	Total Dissolved Solids (TDS)	mg/L	1000	180	170	170	237	211	244	IKM-ENV-166 (Potensiometri)
2	Total Suspended Solids (TSS)	mg/L	50	17	10	15	59	46	55	SNI 6989.3-2019
3	Water Temperature	°C	-	29,4	30,1	30,1	28,4	28,4	28,5	SNI 06-6989.23-2005
4	Air Temperature	°C	-	31,1	31,1	31,1	30,5	30,4	30,6	IKA-10
5	Difference Between Water and Air Temperatures	°C	Dev3	1,7	1	1	2,1	2	2,1	SNI 06-6989.23-2005
6	Color	PtCo	50	2,9	1,8	0,18	3,3	1,5	2,2	SNI 6989.80-2011
	Inorganic									
1	Fluoride (F)	mg/L	1,5	0,74	0,09	0,28	0,15	0,17	0,19	SNI 06-6989.29-2005
2	Chloride (Cl)	mg/L	300	30,7	32,4	28	22,1	32,1	23,1	SNI 6989.19-2019

No	Parameters	Unit	Quality Standards*	Result						Analysis Method
				Semester 1			Semester 2			
				Monitoring Point 1	Monitoring Point 2	Monitoring Point 3	Monitoring Point 1	Monitoring Point 2	Monitoring Point 3	
3	Nitrate (NO3-N)	mg/L	10	7,349	12,974	6,765	0,64	1,472	0,519	SNI 6989.79-2011
4	Nitrite (NO2-N)	mg/L	0,6	2,428	2,173	0,001	0,219	0,205	0,183	SNI 06-6989.9-2004
5	Ammonia (NH3-N)	mg/L	0,2	0,171	0,0006	0,004	1,986	0,739	0,699	SNI 06-6989.30-2005
6	pH	pH Unit	6-9	6,9	6,98	6,98	7,33	7,29	7,38	SNI 6989.11-2019
7	BOD5	mg/L	3	9	8	10	8	8	8	SNI 6989.72-2009
8	COD	mg/L	25	28,8	27,8	34	25,2	27,8	27	SNI 6989.2-2019
9	DO	mg/L	4	6,4	6,4	6,4	5,39	5,53	5,48	SNI 06.6989.14-2004
10	Phosphate (P)	mg/L	0,2	0,63	0,39	0,64	0,12	0,19	0,25	SNI 6989.31-2021
11	Cyanide (CN)	mg/L	0,02	<0,06	<0,006	<0,006	<0,006	<0,006	<0,006	SNI 6989.77-2011
12	Sulfate (SO4)	mg/L	300	30,683	28,99	31,055	23,839	25,616	25,7	SNI 6989.20-2019
13	Free chlorine (Cl_2)	mg/L	0,03	0,03	0,02	0,03	0,03	0,03	0,03	SM APHA 24th Ed., 4500 Cl G, 2023
14	Hydrogen sulfide (H_2S)	mg/L	0,002	0,002	0,002	0,002	<0,002	<0,002	<0,002	SNI 6989.70-2009
15	Total N	mg/L	15	10,47	15,17	6,77	7,02	8,34	10,68	IKM-ENV-128 (Calculation)
	Metals									
1	Mercury (Hg)	mg/L	0,002	<0,0005	<0,0005	<0,0005	<0,0003	<0,0003	<0,0003	SNI 6989.78-2019
2	Arsenic (As)	mg/L	0,05	<0,0006	0,0086	<0,0006	<0,0006	<0,0006	<0,0006	SNI 6989.81-2018

No	Parameters	Unit	Quality Standards*	Result						Analysis Method
				Semester 1			Semester 2			
				Monitoring Point 1	Monitoring Point 2	Monitoring Point 3	Monitoring Point 1	Monitoring Point 2	Monitoring Point 3	
3	Cadmium (Cd)	mg/L	0,01	<0,001	<0,001	<0,001	<0,0006	<0,0006	<0,0006	SNI 6989.82-2018
4	Hexavalent Chromium (Cr6+)	mg/L	0,05	<0,002	<0,002	<0,002	<0,002	<0,002	<0,002	IKM-ENV-131 (Spectrofotometri)
5	Copper (Cu)	mg/L	0,02	<0,011	<0,011	<0,011	<0,002	<0,002	<0,002	SNI 6989.82-2018
6	Lead (Pb)	mg/L	0,03	<0,003	<0,003	<0,003	<0,002	<0,002	<0,002	SNI 6989.82-2018
7	Cobalt (Co)	mg/L	0,2	<0,008	<0,008	<0,008	<0,0006	<0,0006	<0,0006	SNI 6989.82-2018
8	Boron (B)	mg/L	1	0,011	0,011	0,012	0,022	0,024	0,023	SNI 6989.82-2018
9	Selenium (Se)	mg/L	0,05	<0,002	<0,002	0,016	<0,0006	<0,0006	<0,0006	SNI 6989.82-2018
10	Nickel (Ni)	mg/L	0,05	<0,006	<0,006	<0,006	<0,004	<0,004	<0,004	SNI 6989.82-2018
11	Zinc (Zn)	mg/L	0,05	<0,007	<0,007	<0,007	0,006	0,026	0,011	SNI 6989.82-2018
	Organik									
1	Oils and fats	mg/L	1	<0,3	<0,3	<0,3	<0,01	<0,01	<0,01	IKM-ENV-52 (FTIR)
2	DDT	µg/L	2	<0,14	<0,14	<0,14	<0,14	<0,14	<0,14	US EPA 8081B-2007
3	Detergents (MBAS)	mg/L	0,2	0,01	0,011	0,011	0,011	0,010	0,011	SNI 06-6989.51-2005
4	Endrin	µg/L	4	<0,006	<0,006	<0,006	<0,006	<0,006	<0,006	US EPA 8081B-2007
5	Phenol	mg/L	0,005	<0,001	0,002	0,004	<0,001	<0,001	<0,001	IKM-ENV-130 (Spectrofotometri)
6	BHC	µg/L	210	<1,9	<1,9	<1,9	<1,9	<1,9	<1,9	US EPA 8081B-2007
	Microbiology									

No	Parameters	Unit	Quality Standards*	Result						Analysis Method
				Semester 1			Semester 2			
				Monitoring Point 1	Monitoring Point 2	Monitoring Point 3	Monitoring Point 1	Monitoring Point 2	Monitoring Point 3	
1	Fecal Coliform	MPN /100 mL	1000	750	750	1350	860	11000	1000	IKM-ENV-125 (Enzyme Substrate)
2	Total Coliform	MPN /100 mL	5000	6830	6500	13000	8600	43500	14800	SM APHA 24th Ed., 9223B, 2023
	Other Parameters									
1	Manganese (Mn)	mg/L	1*)	0,008	<0,007	<0,007	0,007	0,004	0,005	SNI 6989.82-2018
2	Organic Matter ($KMNO_4$)**	mg/L	25*)	15,8	23,7	10,9	5,1	6	3,6	SNI 06-6989.22-2004
3	Electrical Conductivity	µmhos /cm	1000*)	378	360	377	477,9	409,8	489,2	SNI 6989.1-2019

Sources : RSCM Measurement data, Syslab 2025

* River Water Quality Standards, Government Regulation No. 22 of 2021, Annex VI No. I (Class II)

*) Jakarta Governor's Decree No. 582/1995, Category D

** Not accredited by KAN LP-516-IDN

Exceeding the Quality Standards

Based on data from 2025 (Table 16), surface water around the site showed an increase in total suspended solids (TSS) during the second semester at all monitoring points. The levels of BOD, COD, and DO during the two measurement semesters also exceeded the required quality standards. Microbiological parameters at several monitoring points also exceeded quality standards however, nitrate and nitrite levels showed a decrease in contamination, with nitrate reaching a peak of 12,974 mg/L in the first semester and dropping to just 1,472 mg/L in the second semester. Phosphate and total nitrogen also exceeded the quality standards at monitoring point 2 in the first semester, but levels fell in the following semester. Aside from these parameters, the other parameters were within acceptable ranges.

Table 17. Water Category at RSCM

Category	Monitoring Locations	Key Parameters
Groundwater	Deep wells and monitoring wells around the hospital.	pH, TDS, Nitrate, Nitrite, Heavy Metals (Pb, Hg), and Total Coliform.
Wastewater	Inlet and Outlet of IPAL 1, 2, and 3.	BOD, COD, TSS, Ammonia, Oil & Grease, and Phosphate.
Surface Water	Surface water closed to outfall of Hospital's drainage	Physics, Inorganics, Metals and other parameters .

Link to ESIA

- Public Health and Aquifer Protection: The vast size of hospital growth would significantly increase infectious and chemical liquid effluents. Therefore, the project design must include comprehensive improvement to the Wastewater Treatment Plant (WWTP/IPAL) design to prevent local urban groundwater pollution.
- Clinical and Domestic Water Safety: To guarantee patient safety and compliance with rigorous healthcare cleanliness rules, RSCM should conduct routine physical, chemical, and microbiological testing on the hospital's cleaning water supply to prevent waterborne pathogen outbreaks within clinical wings.

To ensure the upcoming environmental and social study aligns with the strict standards of AIIB and international best practices (EHS), these are the following specific steps and methodologies during the next phase of the project: Effluent Quality Review: Evaluating the effectiveness of the existing wastewater treatment plant in handling the additional load from the new buildings.

1. Hydrogeological Study: Conducting a study of the impact of building foundations on the flow of shallow groundwater in the surrounding area.
2. Stormwater Management Plan: Prepare a rainwater management plan to prevent flooding in the hospital area and its surroundings (given that Jakarta is prone to flooding)
3. Water Balance Analysis: Calculating the water balance for new buildings, including the potential for reusing treated wastewater (water recycling) for watering gardens or flushing toilets in accordance with green building principles.

4.1.6 Asbestos Containing Materials (ACM) in Buildings

The RSCM construction project was carried out on an existing site, beginning with the demolition of the existing buildings. Based on the results of an internal survey of RSCM staff that was conducted on 29 May 2026, it was determined that there are several old buildings, including those with asbestos roofs, that are included in the demolition plan. It is known that there are two sections of buildings that use roofs made of asbestos: the Pharmaceutical Liquids Building and the MODC Building.

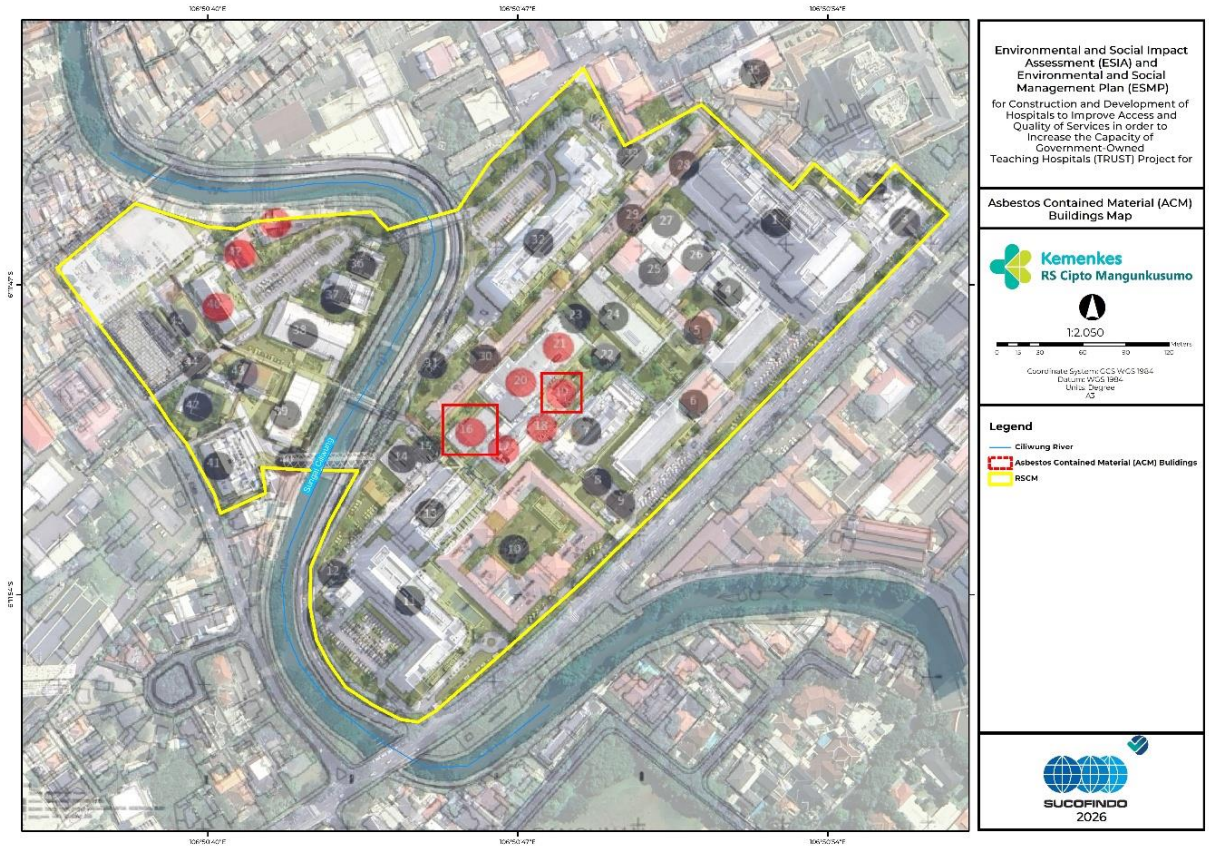


Figure 17 Asbestos Containing Material (ACM) Building Maps



Figure 18 Buildings with Asbestos Roofs

The demolition of building structures containing asbestos roofing materials in hospital areas poses a high risk of releasing chrysotile fibers (asbestos airborne fibers) into the air. If these microscopic particles are inhaled by workers performing the demolition, patients with compromised immune systems, or other visitors in the vicinity of the building, they can cause permanent deposits in the lungs that lead to asbestosis, lung cancer, and mesothelioma. Given that the Pharmaceutical Liquids Building covers an area of 569 m² and the MODC Building measures 46 m², the total amount of asbestos is estimated to reach 828 kg – 1 ton.

Link to ESIA

- Identification of Risk Sources : The ESIA document classifies the demolition of old structures containing ACM as an activity posing a high risk of environmental and occupational health impacts if not properly controlled.
- Planned Demolition Activities: This project involves the demolition of existing structures. Demolition without specialised handling of ACM components may release hazardous asbestos fibres into the open air.
- Community and Medical Impacts (Project Impact Area): As the RSCM is a vital healthcare facility operating 24 hours a day and situated in the densely populated urban area of Central Jakarta, the release of asbestos fibres within the project area could have a direct impact on patients undergoing recovery, medical staff, and the densely populated residential areas directly adjacent to the site therefore, careful planning is required for the demolition work.

Future Requirements and Methodology (ESIA Phase Requirements) to meet AIIB ESS 1 standards and EHS Guidelines, the following steps will be taken:

- Pre-Demolition ACM Survey: Mandatory comprehensive inspection and inventory of legacy structures by certified experts before demolition to detect any historical asbestos-containing materials (ACM) to certify the ACM Survey conducted internally of RSCM..
- Asbestos Management Plan (AMP): Implementation of strict containment protocols—such as wet-handling methods, HEPA-filtered respirators, and isolated work zones—to prevent any fiber release during removal.

- Strict "Zero-Asbestos" Procurement: Enforcing a total ban on the purchase, use, or installation of any new ACM in the expansion phase, strictly adhering to modern healthcare sanitation codes and AIIB standards.
- Safe Chain-of-Custody Disposal: Requiring double-bagging, hazardous waste (B3) labeling, and secure transport of all removed ACM to a licensed hazardous waste facility.
- Air Quality & Health Surveillance: Continuous air monitoring along project boundaries to guarantee zero asbestos fiber contamination inside active clinical wings or adjacent urban communities.

4.1.7 Radioactive Waste Stream

Beyond mechanical and acoustic impacts, operations involving advanced diagnostic and therapeutic technologies—specifically Nuclear Medicine and SPECT-CT imaging—generate liquid and solid radioactive waste streams (classified under medical hazardous waste codes with radioisotope-specific parameters). Uncontrolled management of these streams poses severe radiological health hazards to workers, patients, and the surrounding environment. In alignment with national regulatory frameworks and references from comparable national center hospitals (e.g., Fatmawati Hospital), this risk is mitigated through a strictly enforced, closed-loop radioactive waste management system.

All radioactive waste generated from Nuclear Medicine (SPECT-CT) and radiopharmaceutical practices shall be handled exclusively in full compliance with BAPETEN Regulation No. 16 Year 2014 on Radiation Safety in Nuclear Medicine and international standards including IAEA Safety Standards Series No. GSR Part 3 (Radiation Protection and Safety of Radiation Sources) and WHO Guidance on Safe Management of Wastes from Health-Care Activities.

The operational handling protocol strictly mandates:

- Dedicated Containment: Immediate segregation at the point of generation into dedicated, lead-shielded, and color-coded radioactive waste containers.
- Decay-Storage Protocol: On-site retention within a certified, lead-lined Decay Storage Room to allow short-lived radioisotopes to decay naturally below clearance levels prior to further processing.
- RPO Authorization and Sign-Off: Every stage of waste handling, activity measurement (using calibrated dose calibrators/survey meters), and clearance for release or transfer must receive formal sign-off from a certified Radiation Protection Officer (RPO / *Petugas Proteksi Radiasi - PPR*).
- Licensed Off-Site Disposal: Final off-site transport and ultimate disposal shall be conducted solely by a specialized operator holding active operational licenses from both BAPETEN and the Ministry of Environment (KLH), adhering to established national protocols demonstrated in reference facilities such as Fatmawati Hospital.

4.2 Existing Infrastructure for Environmental Management

4.2.1 Wastewater Management System

The wastewater treatment system in RSCM employs the extended aeration process, with a 500m³/day, 600 m³/day and 800 m³/day capacity. The system is regulated under the Head of Investment and Integrated Services Agency Decree Provinsi Daerah Khusus Ibukota Jakarta No. 45/K.8/31-1.774.15/2017, which grants the permit for wastewater discharge. Treated effluent is discharged into the Ciliwung River via a macro-drainage system.

Drainage Facilities at RSUP Nasional Dr. Cipto Mangunkusumo *(Jalan Pangeran Diponegoro No. 71, Kenari, Kecamatan Senen, Kota Jakarta Pusat, Daerah Khusus Ibukota Jakarta 10430):*

1. The rainwater drainage system at RSUP Nasional Dr. Cipto Mangunkusumo manages runoff from building rooftops. This runoff is channeled through vertical pipes into microdrainage channels, which then flow into infiltration wells equipped with control tanks and overflow mechanisms leading to city drainage channels. The city drainage along Jl. Pangeran Diponegoro is well-structured, allowing effective water flow during rainfall, preventing flooding in the hospital area. The hospital buildings are elevated by +0.50 meters, reducing flood risks. Rainwater on the hospital parking lot is partially absorbed naturally through paving blocks and green areas, while excess water may contribute to minor flooding along Jl. Pangeran Diponegoro during heavy rains, though this recedes quickly.
2. Wastewater Drainage Treated wastewater from RSUP Nasional Dr. Cipto Mangunkusumo's IPAL system is discharged into a designated drainage channel at the back of the hospital area, connected to the Central Jakarta city flood control system. This channel also receives wastewater from offices and commercial activities along Jl. Pangeran Diponegoro. The flow quality is strictly maintained to meet environmental standards, with the final discharge reaching the urban municipal water system.
3. Biopore Infiltration Holes
    - RSUP Nasional Dr. Cipto Mangunkusumo has Biopore Infiltration Holes (LRB), which are small vertical holes in the soil that facilitate natural rainwater absorption. These biopores:
    - Increase rainwater infiltration into the ground, reducing surface runoff and preventing floods during rainy seasons.
    - Help maintain groundwater levels and mitigate drought impacts in dry seasons.
    - Reduce standing water, lowering the risk of mosquito-borne diseases such as Dengue Fever (DBD) and Malaria.
    - These drainage and wastewater management systems help RSUP Nasional Dr. Cipto Mangunkusumo maintain a sustainable and environmentally friendly hospital infrastructure.

Table 18. Existing IPAL Compliance Points

No	Source / Outlet Name	Latitude (LS)	Longitude (BT)	Capacity (m^3/day)
	IPAL Terpadu I	S 6° 11' 46,4856"	E 106° 50' 44.0916"	500
	IPAL Terpadu II	S 06° 11' 49,0236"	E 106° 50' 44,8836"	800
	IPAL Kiara	S 6° 11' 44,8152"	E 106° 50' 55,356"	600

Table 19. Wastewater Treatment System Components

Component	Details
Treatment Method	Extended Aeration
Capacity	500-800 m^3/day
Effluent Discharge Location	Ciliwung River Tributary Channel
Primary Sources of Wastewater	Restrooms, laboratories, pharmacy, mortuary, laundry, kitchen
Key Treatment Stages	1. Screening : Removal of large debris 2. Grit Chamber : Separation of sand and heavy particles 3. Equalization Tank : Temporary storage for flow balancing 4. Aeration Tank : Biological treatment using microorganisms 5. Sedimentation Tank : Separation of sludge 6. Disinfection Tank : Chlorination to eliminate pathogens
Total of Wastewater system	3 main wastewater system



Figure 19. Wastewater Treatment System Condition at RSCM

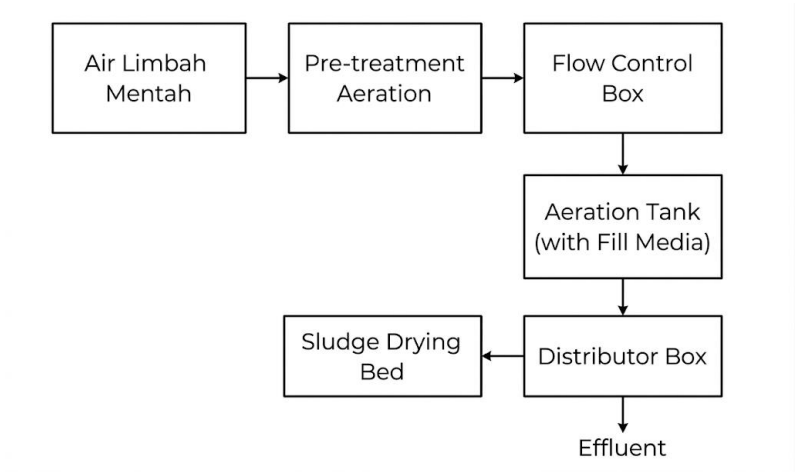


Figure 20. Wastewater Treatment System Flow at RSCM

Link to ESIA

- Effluent Compliance and Public Health: The increased hospital capacity would result in exponentially more infectious, pathological, and chemical liquid waste. Therefore, RSCM is upgrading the performance of its wastewater treatment plant (WWTP), which has a capacity of 2,000 m³, to replace the existing WWTP with a central WWTP in order to comply with DKI Jakarta's strict regulations on wastewater discharge.
- Groundwater and Drainage Protection: To protect the surrounding urban ecology, the ESIA must assess the integrity of internal piping and treatment structures to prevent the possibility of untreated biohazardous leaks into Central Jakarta's shallow aquifers and municipal drainage networks.

4.2.2 Hazardous (B3) and Medical Waste Management

RSUP Nasional Dr. Cipto Mangunkusumo (RSCM), a top national referral hospital, produces specialized medical waste from routine clinical, diagnostic, and research operations in addition to a variety of hazardous and toxic waste categories (locally known as *Limbah Bahan Berbahaya dan Beracun or Limbah B3*).

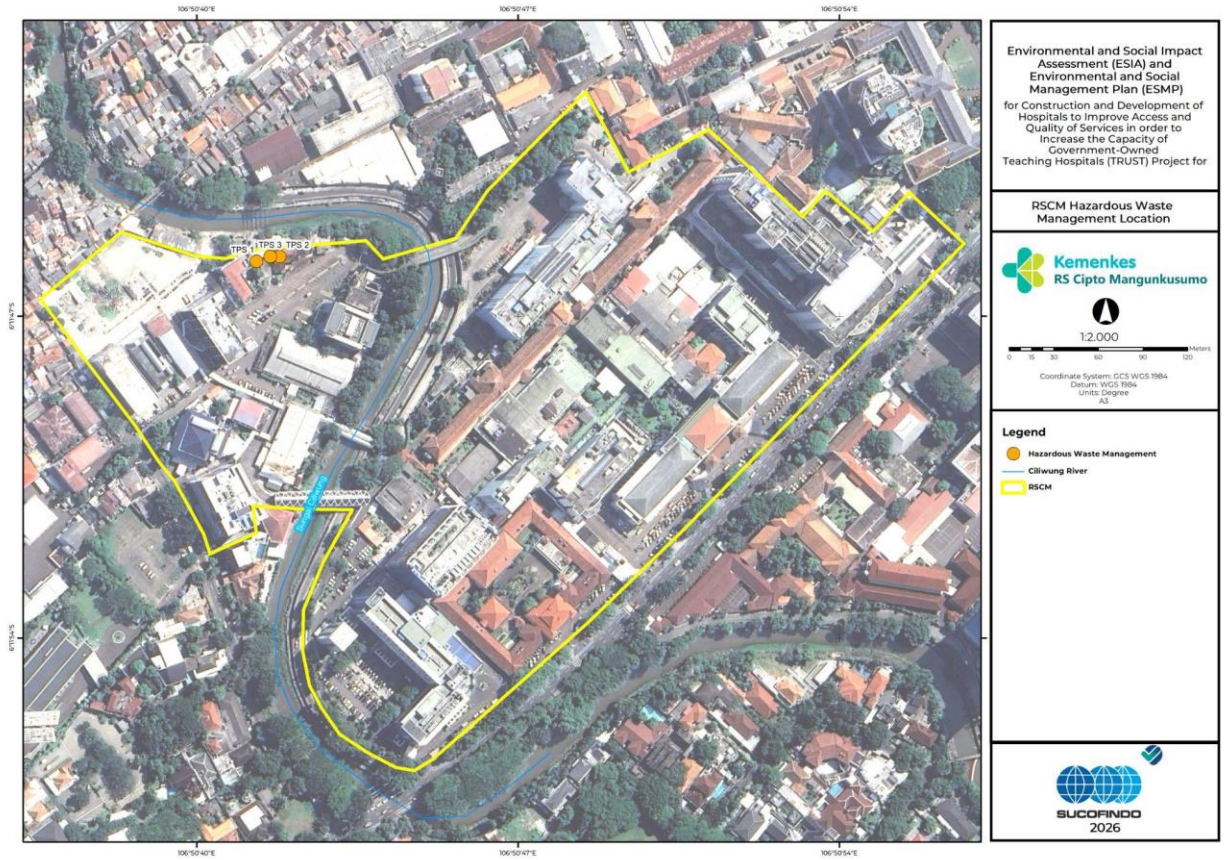


Figure 21.Hazardous Waste Management Location

To reduce environmental contamination and occupational health concerns, the hospital closely controls these waste streams in accordance with Ministry of Environment (KLH) rules and Ministry of Health guidelines.

Table 20. Hazardous Waste Management at RSCM

Category	Details
Transportation	Collected using special trolleys and transported to the Temporary Storage Facility (TPS LB3).
Storage Facility Dimensions	- Medical B3 Waste TPS: 5.5 m x 8 m x 5 m - Non-Medical B3 Waste TPS: (27.5 m x 9 m x 5 m) + (19.25 m x 11 m x 5 m)
Disposal Process	Waste is ¾ full, tied, taken to TPS LB3, and managed by a third- party service provider for destruction.
Regulatory Approval	Jakarta Investment & One-Stop Integrated Service Agency Permit No.
TPS Location (Coordinates)	Latitude: -6.196167° S Longitude: 106.844932° E

Table 21. Types and Volumes of Hazardous Waste Management at RSCM

No	Month	B3 Waste Volume (Kg)					
		Medical Waste (A377-1)	Incinerator Ash Waste (A347-2)	Waste from Used Fluorescent Lamps (B107d)	Waste from Used Batteries (A102d)	Laboratory Waste Containing Hazardous Substances (A106d)	Sludge IPAL (B337-2)
1	January	35.126,02	448,04	28,85	12,75	61,30	-
2	February	33.540,15	-	40,85	-	234,01	-
3	March	33.779,55	211,28	16,20	6,60	37,65	-
4	April	30.189,41	404,47	12,55	-	204,60	-
5	May	34.107,71	-	16,15	-	116,45	-
6	June	34.097,73	-	54,70	-	94,00	-
7	July	39.538,46	-	25,45	-	105,30	124,00
8	August	36.212,32	-	-	-	-	-

No	Month	B3 Waste Volume (Kg)					
		Medical Waste (A377-1)	Incinerator Ash Waste (A347-2)	Waste from Used Fluorescent Lamps (B107d)	Waste from Used Batteries (A102d)	Laboratory Waste Containing Hazardous Substances (A106d)	Sludge IPAL (B337-2)
9	September	37.693,41	-	-	-	-	-
10	October	38.860,80	-	142,55	-	453,65	188,50
11	November	36.925,01	-	-	-	-	-
12	December	37.956,36	-	106,95	-	439,15	-

Sources : RSCM Hazardous Waste Logbook, 2025

1. Waste Categorization and Sources

Hazardous and medical waste generated at RSCM is categorized based on its potential risks and characteristics:

- Emergency rooms (IGD), operating rooms, inpatient wards, intensive care units (ICUs), and outpatient clinics are the sources of infectious and sharp waste. This includes spent syringes, needles, surgical blades, blood-soaked materials, and personal protective equipment (PPE).
- Human tissues, organs, and bodily fluids from surgeries or autopsies performed at the mortuary and pathology departments are referred to as pathological waste.
- Chemical and pharmaceutical waste is mostly produced by clinical labs, pharmacies, and cancer units (cytotoxic waste). It contains wasted diagnostic kits, chemical reagents, and expired medications.
- The Nuclear Medicine and Radiotherapy departments' sophisticated diagnostic imaging and treatment operations are the source of radioactive waste. A more detailed explanation of radioactive waste can be found in subsection 4.1.7
- Used fluorescent lights, electronic garbage (e-waste), wasted batteries, and used engine or generator oils from the facility management units are examples of non-clinical hazardous items classified as general hazardous (B3) waste.

2. Management Protocols and Flow

RSCM implements a rigid, cradle-to-grave waste management system divided into four primary stages:

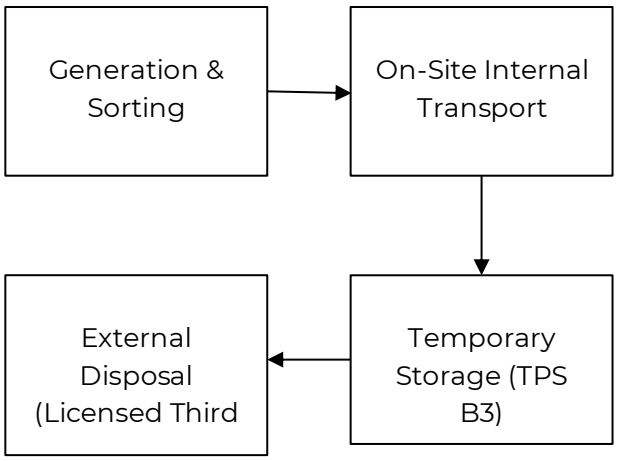


Figure 22. Hazardous Management Flow at RSCM

a. Segregation and Color-Coded Labeling

Waste is segregated immediately at the point of origin using internationally recognized color-coded containers and plastic bags:

- Yellow Bags/Bins: For infectious and clinical waste.
- Yellow Rigid Biohazard Containers: Exclusively for sharps (needles, scalpels).
- Purple Bags/Bins: For cytotoxic and hazardous pharmaceutical waste.
- Brown Bags/Bins: For general chemical and non-clinical hazardous waste.

b. Internal Collection and Transportation

- Segregated waste is collected daily or whenever containers reach 75% capacity.
- To reduce exposure to patients and guests, internal transportation is carried out via specified, low-traffic routes utilizing special, leak-proof wheeled containers.
- Heavy-duty gloves, aprons, masks, and safety boots are among the required Personal Protective Equipment (PPE) for employees handling trash.
- PPE (personal protective equipment), including heavy-duty gloves, aprons, masks, and safety boots.

c. On-Site Temporary Storage (*Tempat Penyimpanan Sementara* - TPS B3)

- Collected hazardous and medical waste is safely stored at the licensed TPS B3 facility located within the RSCM premises.
- The storage facility is equipped with secondary containment systems, proper ventilation, fire protection, emergency eyewash stations, and strict temperature control (particularly for infectious waste requiring refrigeration to prevent decomposition).
- Logbooks and log sheets (*logbook dan neraca limbah*) are meticulously updated daily to track incoming and outgoing waste volumes.

d. Off-Site Disposal and Final Treatment

The Vendor: PT Prasadha Pamunah Limbah Industri (PT PPLI), operating its primary integrated facility (Plant Bogor) at Nambo, Klapanunggal, Bogor Regency, West Java. There are 6 core regulatory approvals verified across the files:

- Ministry of Environment and Forestry (KLHK) Decree No. 907 Year 2025: Integrated Environmental Feasibility Approval (*SKKLH*) for nationwide B3 and Non-B3 waste handling and management operations.
- KLHK Technical Recommendation S. 62/G-G.4/PK/PLB.5.3/B/02/2026: Official Ministry clearance specifically authorizing the road transportation of hazardous medical and industrial waste codes.
- Directorate General of Land Transportation (Hubdat) Decree No. 81200079205610011: Official land transit operating license allowing their transport fleet to move hazardous cargo on public roads (valid through February 2028).
- Risk-Based Business Registration License (NIB) No. 8120007920561: National corporate operating license issued through the OSS system under Foreign Direct Investment (PMA) status.
- KLHK Director General Approval S.325/PSLB3/PLB3/PLB.3/06/2024: Official technical amendment authorizing active co-processing, treatment, utilization, and secure landfilling (*Penimbunan Uji Coba/Komersial*) at their Bogor plant.
- KLHK Inter-Agency Recommendation S. 103/PSLB3-VPLB3/PPLB3/PLB.3/3/2021: Transport and logistical authorization detailing exact waste handling container codes (e.g., yellow safety bags, sharp boxes, and drums) matching hospital standards.

Waste manifest systems (electronic manifests or *Festronik*) are utilized to track and verify that all medical and B3 waste is safely transported and incinerated or chemically treated at authorized off-site facilities.

Link to ESIA

- Biohazard Containment and Public Safety: The expansion of inpatient facilities will result in higher volumes of infectious, pathological, and sharp waste, necessitating strict point-of-origin segregation and increased Temporary Storage (TPS B3) capacity to prevent community cross-contamination.
- Regulatory Tracking and Legal Compliance: To reduce severe environmental liabilities, the ESIA must assess the entire downstream logistics loop, ensuring that all hazardous and radioactive clinical waste is handled, transported, and incinerated solely by licensed third-party operators who adhere to Ministry of Environment and Forestry regulations.

4.2.3 Solid Waste Management

RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) produces a substantial amount of non-hazardous solid trash (domestic waste) every day in addition to hazardous and medical waste. This waste stream, which comes from administrative offices, patient companion waiting spaces, food preparation facilities (kitchens), cafeteria operations, and general groundskeeping, is similar to municipal solid trash.

In order to reduce the amount of garbage transported to municipal landfills, RSCM is dedicated to an environmentally friendly waste management framework that prioritizes waste reduction, source segregation, and maximizing recycling potential.

Table 22. Domestic Waste Generation at RSCM

No	Month	Waste Type		
		2024		
		Residu	Organic	Recycling
1	January	82.103,42	8.349,50	3.579,41
2	February	73.868,42	7.467,00	5.354,05
3	March	70.850,57	7.479,00	5.756,00
4	April	67.904,25	7.696,00	5.210,00
5	May	73.976,46	7.426,00	7.637,00
6	June	80.519,58	5.332,00	12.695,00
7	July	84.546,75	9.232,00	11.797,00
8	August	84.556,44	8.785,00	7.854,62
9	September	79.052,21	8.726,00	11.104,18
10	October	87.390,35	9.230,72	10.465,09
11	November	87.441,09	6.399,00	10.131,37
12	December	88.302,56	10.260,00	9.988,53
	Jumlah	**960.512,10**	**96.382,22**	**101.572,25**

Sources: RSCM SolidWaste Data, 2025

1. Waste Categorization and Sources

Non-hazardous solid waste at the hospital is broadly categorized into three main streams:

- Organic / Biodegradable Waste: Comprises food scraps from the central kitchen and inpatient meal services, as well as garden/yard waste (leaves, grass clippings) from the hospital's landscaped open spaces.
- Recyclable Inorganic Waste: Includes clean plastic bottles, beverage cans, cardboard boxes from pharmaceutical/supply deliveries, office paper, and glass containers.
- Non-Recyclable Residual Waste: Comprises general single-use tissues, soiled food packaging, and miscellaneous non-hazardous materials that cannot be recycled economically.

2. Non-Hazardous Solid Waste Management Protocol

RSCM adopts a structured management flow aimed at promoting sustainable practices inside the hospital complex:

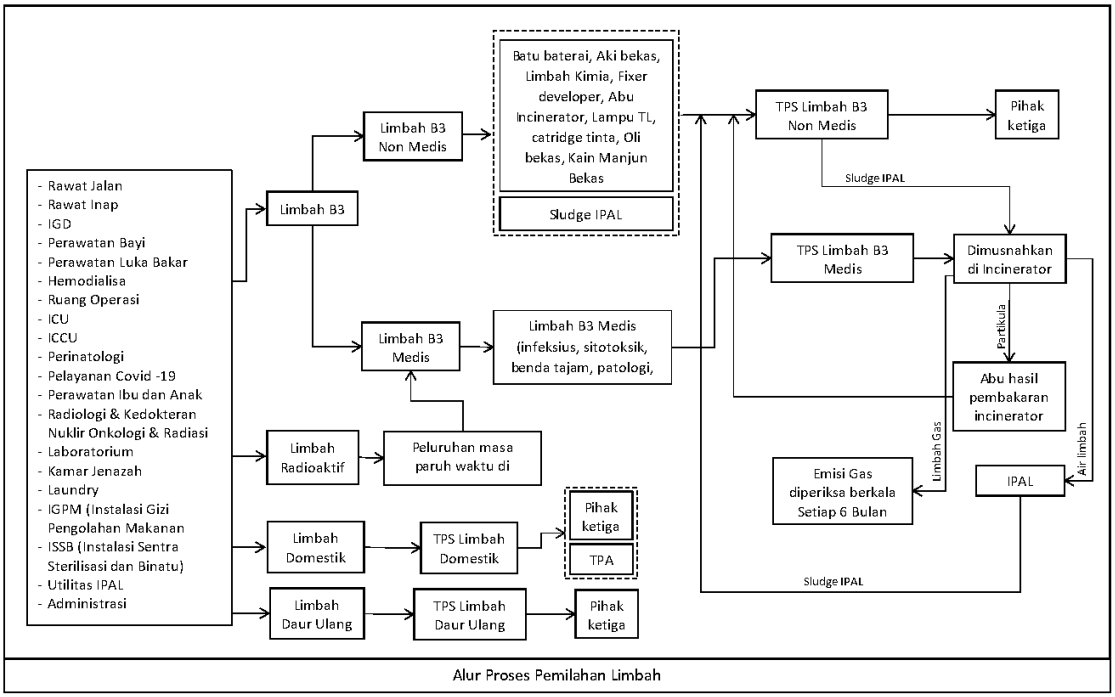


Figure 23. Non-Hazardous Solid Waste Management Flow

a. Source Segregation and Bin System
To support municipal waste sorting initiatives, RSCM places clearly labeled, color-coded domestic waste bins throughout all public areas, offices, and wards:

- Green Bins: Designated exclusively for organic and biodegradable waste.
- Black Bins: Designated for non-recyclable residual domestic waste.
- Blue/Yellow Bins (Recycling): Designated for clean paper, cardboard, plastics, and metals.

b. Waste Reduction and Recycling Initiatives (3R)
RSCM actively implements the Reduce, Reuse, Recycle (3R) principles to manage its carbon and environmental footprint:

- Paperless Systems: Reducing office paper usage by making a significant shift to digital administration using the Hospital Management Information System (SIMRS).
- Bulk Packaging Procurement: Motivating suppliers to reduce surplus packaging materials.

- Recycling Partnerships: Before being given to approved local recycling partners or trash banks (Bank Sampah), separated recyclable inorganic debris (such as cardboard boxes and plastic containers) is temporarily sorted and packaged.

c. Internal Collection and Temporary On-Site Storage (*TPS Domestik*)

- Domestic waste is collected at scheduled intervals at least twice a day by the hospital's environmental services/cleaning team.
- Dedicated, closed cleaning carts are used to transport domestic waste to prevent odor dispersion and pest attraction.
- The waste is collected at the Temporary Domestic Waste Storage Area (TPS Domestik) within the RSCM complex, which is kept separate from the Hazardous (B3) Waste Storage Area to prevent any cross-contamination.

d. Final Disposal

- The remaining non-recyclable residual domestic waste is routinely hauled daily from RSCM's TPS by the local environmental agency (*Dinas Lingkungan Hidup* Jakarta Pusat).
- The waste is transported via municipal compacting trucks to its final designated provincial disposal site (Bantargebang landfill).

Link to ESIA

- Vector Control and Sanitation: Due to the significant increase in daily domestic waste (such as food scraps and packaging) from expanded inpatient wards and visitors, the ESIA must provide strict on-site storage and disposal protocols to prevent pest infestations and maintain clinical sanitation.
- Municipal Waste Strain Mitigation: To reduce the burden on Jakarta's overburdened municipal landfills (Bantargebang), the ESIA must assess waste reduction, source segregation, and recycling initiatives within the hospital's operational framework while adhering to local waste management regulations.

4.2.4 Biodiversity Ecosystem Services

Dr. Cipto Mangunkusumo National Central General Hospital building complex lies right next to CIliwung River, The Ciliwung river constitutes a critical hidrological system in western java, originating within the high elevated catchments of Puncak region and flowing approximately 120 km through the dense urban corridors of Bogor, Depok, and Jakarta before discharging into the Jakarta bay. The river has historically functioned as a vital socioeconomic artery and continues to serve as a primary source of raw municipal water. Within the regional hydrological framework, the Ciliwung basin acts as the central drainage conduit for an expansive watershed plagued by rapid land use conversion.

The projected new buildings' biological environment is a completely altered urban ecology (modified habitat). There are a few green open spaces that function as hospital gardens and shade trees; however, most of the land is made up of paved areas (roads and parking lots).

The proposed expansion project will not alter the flow nor the shape of Ciliwung river, nor will have any direct works within the river, riverbanks, or river channel. The only authorized discharge from the project into the river will be treated wastewater, fully compliant with all applicable regulatory limits and environmental standards.

The biological component of this ESIA study focuses on a list of large trees that could be affected (felled or removed) during construction. The project will give priority to preserving existing vegetation or replacing trees in compliance with AIIB standards and green building principles. An environmental management scheme will be utilized to maintain air quality, the hospital's microclimate, and its aesthetics

Based on field observations on the RKL-RPL Implementation Report, the following is a general description of the biological components in the hospital area.

Table 23. Biodiversity and Ecosystem Services Comparison

Category	Ecological Status
Flora (Trees)	Common / Not Protected
Flora (Landscaping)	Managed Vegetation
Fauna (Birds)	Common / Urban Fauna
Air Quality Contribution	Minimal due to limitedvegetation
Water Management	Moderate ability to retain rainwater and prevent erosion
Psychological and Health Benefits	Green spaces provide stress relief for pediatric patients and families
Potential for Improvement	Increase green spaces and implement rooftop gardens





Figure 24. Existing Green Spaces at RSCM

Link to ESIA

- Urban Canopy Protection: When clearing vegetation for new vertical structures, the ESIA must assess the loss of old urban trees and mandate a tight compensatory replanting program to protect local bird habitats and maintain natural microclimate cooling on-site.

  Micro-climate and Run-off Regulation: The conversion of green pockets into built-up areas limits natural rainfall penetration, prompting the ESIA to require nature-based mitigation options (such as bioswales, rain gardens, or green roofs) to maintain localized urban ecosystem drainage functions.

5. Social Conditions

In order to create a standard by which social risk and impact assessment and monitoring are conducted throughout project construction and operation, this chapter describes social conditions. The data in this chapter serves as a trustworthy foundation for creating the social baseline by utilizing both primary data (obtained via original testing) and secondary data gathered and aggregated from existing sources pertinent to the project.

However, there is still a lack of precise baseline data on important social issues in the Project area, such as the frequency of gender-based violence (GBV), the circumstances of vulnerable groups, and other community dangers. The project has gathered extra data through public consultations with focused stakeholder engagements and active interaction with local authorities during the preparation of the ESIA document. In addition to assisting in the identification of social hazards, this participatory method will allow the project to create suitable, context-specific mitigation strategies, such as awareness campaigns, referral systems, and easily accessible reporting systems. In order to promote accountability and community confidence, ongoing communication with stakeholders will guarantee that GBV hazards, the needs of vulnerable groups, and other community concerns are addressed and monitored throughout the project cycle.

5.1 Demographic Characteristics

RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) is strategically located in the Kenari sub-district of Senen district, which is part of the Administrative City of Central Jakarta. Central Jakarta, the administrative and historical heart of Jakarta's The Special Capital Region has distinct demographic characteristics such as high daytime population density, rising urban gentrification, and a broad socioeconomic mix. Understanding these demographic factors is critical for assessing the hospital's major catchment region, specific public health needs, and potential socio-environmental implications on the surrounding community.

5.1.1 Population Density and Urban Dynamics

Senen district in Central Jakarta has a total population 119.457 people with gender ratio 60.405 males and 59.052 females with a population density of 28.303,32 people per km².

Table 24. Total Population Demographics in Senen District

Subdistrict	Population			Percentage of the Population (%)	Population Density / km²
	Male	Female	Total		
Kenari	5.706	5.494	11.200	9,38%	12.235,09
Paseban	13.833	13.861	27.694	23,18%	38.781,68
Kramat	17.212	16.609	33.821	28,31%	47.722,59
Kwitang	9.041	8.988	18.029	15,09%	40.333,33
Senen	3.955	3.804	7.759	6,50%	9.590,85
Bungur	10.658	10.296	20.954	17,54%	33.451,47
Senen	**60.405**	**59.052**	**119.457**	**100,00%**	**28.303,32**

Source: Central Bureau Statistics of Indonesia, 2024

Meanwhile, Menteng Subdistrict has a population of 86,443 , comprising 43,396 males and 43.049 female, and a population density of 13.237,83 people per km².

Table 25.Total Population Demographics in Senen District

Subdistrict	Population			Percentage of the Population (%)	Population Density per sq.km
	Male	Female	Total		
Menteng	14.975	15.130	30.105	34,83	12.338,11
Pegangsaan	13.920	13.633	27.553	31,87	28.115,31
Cikini	4.936	4.841	9.777	11,31	11.923,17
Gondangdia	2.168	2.426	4.594	5,32	3.146,58
Kebon Sirih	7.395	7.019	14.414	16,67	17.366,27
Menteng	**43.394**	**43.049**	**86.443**	**100**	**13.237,83**

Source: Central Bureau Statistics of Indonesia, 2024

High-Density Settlement: The neighborhoods around the hospital complex, notably in the Senen and Menteng sub-districts, include a mix of high-density residential settlements and commercial, institutional, and government corridors.

Daytime (6:00 AM – 6:00 PM) vs. Nighttime (6:00 PM – 6:00 AM) Population Fluctuations: Central Jakarta receives a significant inflow of commuters from nearby satellite cities (Bogor, Depok, Tangerang, and Bekasi). As a result, the daytime population is much larger than the official

nighttime residential population. This temporary population puts an additional strain on local infrastructure, transportation systems, and emergency medical services supplied by RSCM.

Link to ESIA

- High population density drives demand for accessible medical services, highlighting the importance of an efficient healthcare system.
- The aging population needs increasing geriatric care services, making RSCM indispensable for aged care.
- The ESIA must mandate a strict construction Traffic Management Plan that restricts heavy vehicle hauling to off-peak nighttime hours and enforces an obstruction-free corridor exclusively for emergency ambulances.
- Accidents & Infrastructure Safety: The project must install heavy-duty physical barriers around construction zones while incorporating universal design features, like tactile pathways and ramps, to protect dense pedestrian crowds and elderly patients.
- Gender-Based Violence (GBV): The ESIA must enforce a zero-tolerance worker Code of Conduct paired with 24/7 CCTV monitoring and high-intensity illumination along all public detours to eliminate blind spots.
- Spread of Communicable Diseases: The site must implement rigorous dust suppression and vector-control protocols alongside mandatory workforce health screenings to prevent transmission of respiratory or infectious diseases to vulnerable hospital populations.

Socioeconomic Profile

- Economic diversity: The demographic around RSCM includes low-income households living in densely packed urban kampongs as well as middle- and upper-class residents in planned urban districts.
- Livelihoods and Employment: The formal service industry, commerce, retail, hospitality, and public administration employ a large section of the local workers. However, a considerable informal sector occurs around transportation hubs (such as adjacent train stations and bus terminals) and commercial districts, which includes street sellers, informal transport providers, and casual laborers. Diponegoro street, Inspeksi street, and Salemba street are the main streets where street vendors may be affected by the construction.
- Vulnerable Groups: Close emphasis is devoted to mapping low-income households and elderly populations residing within the immediate neighborhood of the hospital since they are the most vulnerable groups prone to environmental changes. (e.g., localized flooding, urban heat, or construction noise) and are highly reliant on accessible public health safety nets.
- Access to Services: Basic services including water, sewage, and power are adequate in cities, but informal settlements have difficulties. Healthcare availability is a challenge, with public health facilities (puskesmas) unable to satisfy demand for specialist services, emphasizing the need for hospital growth.

Link to ESIA

- Low-income populations have challenges to receiving specialized medical treatment, necessitating measures that improve access to affordable healthcare.
- Informal workers lack health insurance, which increases dependency on BPJS-supported hospital services.

5.1.2 Primary Healthcare Indicators

The state of primary healthcare and its impact on specialist medical services are summarized in the table below. The following health indicators provide detailed data on the prevalence and strategic significance of various key health indicators.

Table 26. Health Indicators

Health Indicator	Rate	Significance
Hypertension	25%	High demand for cardiology services
Diabetes	15%	Increased need for endocrinology care
Cardiovascular diseases	10%	Critical for cardiac healthcare
Asthma/COPD	12%	Linked to air pollution, emphasizing respiratory care
Tuberculosis	50-60 cases per 100,000 people	Infectious disease control needed
Dengue fever	Seasonal outbreaks	Preventive care and rapid response essential
Maternal Mortality Rate	120 deaths per 100,000 live births	Higher than national average
Infant Mortality Rate	20 deaths per 1,000 live births	Need for neonatal and pediatric care

Source: Central Bureau Statistics of Indonesia

- National and Regional Referral Baseline: While RSCM is a top-tier national referral hospital that receives complicated clinical patients from all across Indonesia, it also acts as an important secondary and tertiary care institution for the Central Jakarta community.
- Universal Health Coverage (JKN): The majority of local inhabitants who receive medical care at RSCM use the national health insurance system (Badan Penyelenggara Jaminan Sosial Kesehatan, or BPJS Kesehatan). The local demographic figures show a high usage rate of subsidized healthcare, making the hospital's operational continuity critical to the region's public health safety net.
- Public Transportation Connectivity: According to the demographic profile, a large number of patients and visitors use public transportation to get to the institution. The hospital's closeness near key commuter routes (such as TransJakarta corridors and commuter train

stations) has a significant impact on local traffic management strategies, pedestrian safety measures, and general accessibility.

Link to ESIA

- Expanding hospital infrastructure improves service coverage for disadvantaged populations.

5.2 Accessibility and Quality of Hospital Services

RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) is recognized as Indonesia's national top-tier referral hospital (*Rumah Sakit Rujukan Nasional*). It is the principal teaching hospital for the Faculty of Medicine, Universitas Indonesia (FKUI). Because of this unusual dual duty, the accessibility and quality of its services have a direct impact on public health equality, clinical standards, and medical education throughout the Indonesian archipelago, not only Central Jakarta.

5.2.1 Accessibility of Hospital Services

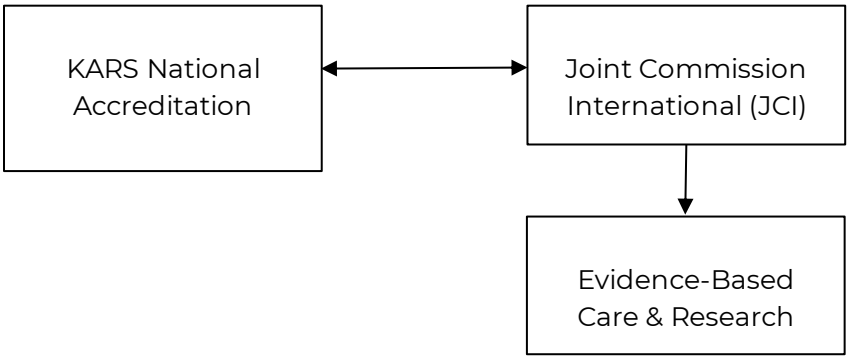
a. Geographical and Multi-Modal Transit Connectivity. Located on Pangeran Diponegoro Street of Central Jakarta, RSCM is exceptionally well-integrated into Jakarta's primary mass transit systems, removing significant physical barriers for patients from diverse socioeconomic backgrounds.
b. Rail Connectivity: The hospital complex is a short walk from Cikini Commuter Line Station, offering easy access for patients traveling from Bogor, Depok, Tangerang, and Bekasi.
c. Bus Rapid Transit (BRT): Dedicated TransJakarta bus lanes and feeder routes stop right in front and around the hospital boundary, providing cost-effective urban transportation.
d. Ambulance and Emergency Corridors: As a key landmark in Central Jakarta, the roads that feed into RSCM (such as Jl. Diponegoro and Jl. Salemba Raya) have designated lanes and priority routing to improve emergency medical vehicle response times.

5.2.2 Socio-Economic Accessibility and Financial Inclusivity

a. Universal Health Coverage (JKN/BPJS): The RSCM is the primary safety net for the national health insurance system. The hospital treats a high number of BPJS Kesehatan patients every day, reducing financial barriers to advanced surgical, oncological, and pediatric tertiary care for low- and middle-income people.
b. To manage large crowds and enhance patient flow, RSCM uses integrated digital solutions. This allows patients to register remotely, watch appointment queues, and get telemedicine consultations, bridging the gap for those with mobility challenges or living outside of the city.

5.2.3 Quality of Hospital Services and Clinical Standards

RSCM operates under a stringent Quality Assurance (QA) and Continuous Quality Improvement (CQI) framework to maintain its status as a world-class institution.



National and International Accreditations

a. RSCM is internationally accredited by the Joint Commission International (JCI), proving that its patient safety protocols, clinical care paths, and governance models align with global benchmarks.

Key Quality Indicators (KQIs)

The hospital continuously monitors a robust set of operational and clinical indicators to guarantee high-quality outputs:

a. Patient Safety Objectives: Strict adherence to international patient safety objectives (IPSG), including precise patient identification, good communication among medical personnel, high-alert drug safety, surgical site verification, and proactive hospital-acquired infection (HAI) prevention.
b. Emergency Response Times: Keeping rigorous benchmarks for Emergency Department (IGD) triage, ensuring critical condition patients receive urgent, life-saving interventions without administrative delays.
c. Clinical Excellence Centers: RSCM is home to specialized national centers of excellence such as advanced oncology (radiotherapy and chemotherapy), the Integrated Heart Center, human organ transplantation, and neonatal intensive care, which ensure that cutting-edge medical technologies are supported by compassionate, high-quality clinical expertise.

5.2.4 Patient Experience and Feedback Mechanisms

a. Integrated Complaint Management: In accordance with corporate and public responsibility, RSCM has an active Patient Experience and Complaints Unit.
b. Regular patient satisfaction surveys (*Indeks Kepuasan Masyarakat*) are distributed digitally across the wards. Feedback is included into regular hospital management

assessments to quickly resolve issues with hospitality, wait times, facility cleanliness, and medical communication.

Link to ESIA

- Equity of Access and National Patient Care: As Indonesia's premier referral hospital, any service disruption during construction has a direct impact on vulnerable patients across the country, prompting the ESIA to require seamless, uninterrupted clinical intake workflows and clear digital communication channels.
- Clinical Excellence and Facility Safety: Modernization has a direct impact on healthcare delivery standards, requiring the ESIA to ensure that new vertical wings meet international patient safety codes, universal accessibility designs (e.g., for disabled patients), and stringent hospital accreditation requirements.

5.3 Employment and Workforce Conditions

As the principal national reference and teaching hospital, RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) oversees a sizable and diversified workforce. This includes civil servants (*Pegawai Negeri Sipil or PNS*), government employees with work contracts (*Pegawai Pemerintah dengan Perjanjian Kerja or PPPK*), non-civil servant permanent/contract personnel, outsourced workers (such as security, catering, and cleaning services), clinical residents, and medical students from the Faculty of Medicine, Universitas Indonesia (FKUI).

RSCM is committed to providing fair, safe, equitable, and legally compliant working circumstances that are consistent with Indonesian labor law (*Undang-Undang Ketenagakerjaan*), civil service laws, and international labor rights and workplace safety standards. This workforce distribution highlights the critical role of nursing professionals, who form the backbone of patient care. The relatively smaller number of doctors emphasizes the need for more specialized medical personnel.

Table 27. Man Power in RSCM at 2026

No	Category	Sub Category	Employment Type		
			Officer	Doctor	Outsourced Staff
1	Gender	Man	1524	53	
		Woman	3733	33	
2	Age	**< 30**	911	0	
		Man	161		
		Woman	750		
		30 - 39	1863	4	

No	Category	Sub Category	Employment Type		
			Officer	Doctor	Outsourced Staff
		Man	526	3	
		Woman	1337	1	
		40 - 49	1524	5	
		Man	499	4	
		Woman	1025	1	
		≥ 50	959	77	
		Man	338	46	
		Woman	621	31	
3	Employee Status	**Civil Servants at the Ministry of Health**	3004		
		Man	830		
		Woman	2174		
		PPPK Ministry of Health	1579		
		Man	481		
		Woman	1099		
		Non-Civil Servant BLU	555		
		Man	169		
		Woman	340		
		Civil Servants at the Ministry of Research, Technology, and Higher Education	68		
		Man	24		
		Woman	45		
		UI Staff	48		
		Man	20		
		Woman	28		
4	Occupation	**Medical Laboratory Technologist**	177		

No	Category	Sub Category	Employment Type		
			Officer	Doctor	Outsourced Staff
		Man	27		
		Woman	150		
		Pharmacist	68		
		Man	11		
		Woman	57		
		Audiology	3		
		Man	3		
		Woman	0		
		Midwife	57		
		Man	0		
		Woman	57		
		Biology	9		
		Man	1		
		Woman	8		
		Dietitian	35		
		Man	2		
		Woman	33		
		Doctor	101		
		Man	25		
		Woman	76		
		Dentist	4		
		Man	1		
		Woman	3		
		Dental Specialist	20		
		Man	3		
		Woman	17		

No	Category	Sub Category	Employment Type		
			Officer	Doctor	Outsourced Staff
		Specialist	517	86	
		Man	266	53	
		Woman	251	33	
		Electromedical	59		
		Man	33		
		Woman	26		
		Expert in Public Health Entomology	2		
		Man	1		
		Woman	1		
		Medical Physicist	15		
		Man	6		
		Woman	9		
		Physical Therapist	41		
		Man	12		
		Woman	29		
		Nutritionist	32		
		Man	1		
		Woman	31		
		Occupational Therapist	9		
		Man	1		
		Woman	8		
		Orthotics and Prosthetics	4		
		Man	1		
		Woman	3		
		Occupational Health Advisor	6		
		Man	1		
		Woman	5		

No	Category	Sub Category	Employment Type		
			Officer	Doctor	Outsourced Staff
		Anesthesiologist	47		
		Man	19		
		Woman	28		
		Nurse	1981		
		Man	325		
		Woman	1656		
		Medical Records and Health Information	133		
		Man	39		
		Woman	94		
		Clinical Psychology	5		
		Man	0		
		Woman	5		
		Radiographer	108		
		Man	44		
		Woman	64		
		Radiation Therapist	24		
		Man	13		
		Woman	11		
		Optician / Optometrist	18		
		Man	7		
		Woman	11		
		Cardiovascular Engineering	1		
		Man	0		
		Woman	1		
		Blood Service Techniques	54		
		Man	16		
		Woman	38		

No	Category	Sub Category	Employment Type		
			Officer	Doctor	Outsourced Staff
		Dental Technician	5		
		Man	2		
		Woman	3		
		Administrative Staff	1349		
		Man	615		
		Woman	734		
		Health Policy and Administrative Staff	10		
		Man	1		
		Woman	9		
		Environmental Sanitation Workers	19		
		Man	5		
		Woman	14		
		Pharmaceutical Technician	295		
		Man	33		
		Woman	262		
		Dental and Oral Therapist	36		
		Man	6		
		Woman	30		
		Speech Therapist	13		
		Man	4		
		Woman	9		

Source: OSDM Division of RSCM, 2026

Gender Gap

Existing Conditions & Gaps: The workforce is heavily dominated by women (70.5% / 3,766 people) compared to men (29.5% / 1,577 people). However, women are susceptible to being concentrated in lower-paid administrative or staff nursing positions, while top management roles have historically been male-dominated. Risk of Low-Wage Concentration: The female majority is heavily concentrated in frontline/support roles, such as Pharmacy Technicians (262 women vs. 33

men), Nursing, and Administrative staff. These operational positions typically yield lower average incomes compared to highly specialized or structural roles, driving the economic gender gap.

a. Project-Level Actions (Leadership):
   - Tailored Leadership Development programs for female staff to boost their representation in top management.
   - Equal Pay: Regular remuneration audits based on the principle of equal pay for equal work.
b. Project Benefit Commitments:
   - Training: A minimum quota of 70% female participants for advanced technical and medical training.
   - Construction: A 5% - 10% quota for female workers in HSE (Health, Safety, and Environment), logistics, and field administration sectors.

Community Access to Medical Services

Women are hindered by domestic burdens (childcare/housework), leading to delayed medical care, and often face financial dependence on husbands for transport costs.

Project GAP Interventions:

- Digitalization: Provide online registration and telemedicine to slash waiting times.
- Child-Friendly Facilities: Equip the new building with secure lactation rooms, temporary daycare, and child-friendly waiting areas.

Environmental & Social (E&S) Risk Management

- Community Impacts to Noise & Dust: Most disruptive to housewives during afternoon rest (11:00 AM – 2:00 PM). Women (carrying children/groceries) are highly vulnerable to project truck-damaged roads. The mitigation is alt noisy works during rest hours, deploy flagmen at crossings, and spray water regularly for dust control.
- Labor Influx & GBV Risks: Large influx of male workers raises harassment (catcalling) risks for female staff/residents. Mitigation: Mandatory Code of Conduct with immediate termination, separate worker vs. staff/patient pathways, and enhanced site lighting.
- GBV Referral Mapping: Emergency pathways through P2TP2A DKI Jakarta (psychological/legal), Jakpus Police PPA Unit (law enforcement), RSCM ER (medical), and Hotline SAPA 129.
- Women often miss public meetings due to domestic chores. The solution is conduct separate, late-afternoon female FGDs and engage local Posyandu/PKK networks.
- Land & Vulnerable Groups: Female-headed tenants or street vendors impacted by the project must be prioritized for direct compensation, alternative commercial spaces, for health and safety (especially during construction) or vulnerability allowances if applicable due to relocation of their business.
- OHS & Labor: Provide properly sized female-fitted PPE (vests, helmets, boots).

Labor and Working Conditions

a. Human Resources (HR) Policies and Fair Treatment
   - Non-Discrimination and Equal Opportunity: RSCM enforces strict recruitment and employment policies that forbid discrimination based on race, ethnicity, religion, gender, marital status, or physical disability. Career progression, remuneration, and performance evaluations are strictly merit-based.
   - Prevention of Forced and Child Labor: The hospital absolutely prohibits any form of child labor or forced labor within its operations and ensures that all external vendors and third-party contractors adhere to identical compliance standards.
   - Grievance Redress Mechanism (GRM) for Workers: A formal and confidential internal channel is provided for all staff members to voice workplace grievances, reports of harassment, or unfair treatment without fear of retaliation. This mechanism is integrated with the hospital's HR department and compliance committee, the staff members may call 1500 135 or whatsapp 08119935135.

b. Working Hours, Compensation, and Benefits

   - Scheduled Shifts and Overtime: Due to the 24/7 nature of crucial healthcare operations, medical and support personnel operate on a scheduled shift rotation. Working hours and overtime pay carefully adhere to state civil service rules and national labor legislation to prevent provider tiredness and maintain patient safety.
   - Employees are compensated with attractive wages, performance-based incentives (*remunerasi*), and comprehensive healthcare and social security benefits via BPJS Ketenagakerjaan (employment injury, old-age, and life insurance) and BPJS Kesehatan (health insurance).

c. Workforce Well-being and Mental Health
   Recognizing the high-stress environment of a national referral hospital, RSCM actively integrates mental health and well-being initiatives. This involves psychological counseling, stress management courses, and proactive monitoring to address and reduce professional burnout among medical residents, nurses, and support personnel.

Link to ESIA

- Labor Rights and Occupational Fair Practice: Due to the sudden influx of a large construction workforce, the ESIA must ensure strict compliance with Indonesian labor laws and international standards (AIIB's ESF 2024), including fair wages, non-discrimination, safe worker housing, and the prevention of child labor. Additionally, strict measures against Gender-Based Violence (GBV) and Sexual Exploitation, Abuse, and Harassment (SEA/SH) will be implemented—including zero-tolerance Codes of Conduct and localized grievance channels—to protect vulnerable populations within RSCM, adjacent dense kampung communities, and external street vendors.

- Occupational Health and Safety (OHS) Protection: Working in a high-risk civil engineering and active hospital environment requires the ESIA to implement stringent safety protocols, such as mandatory Personal Protective Equipment (PPE), site-safety training, and continuous health surveillance, to prevent workplace accidents and infection transmission.

5.4 Social Safety and Security

As a high-traffic national referral hospital in Central Jakarta, RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) manages a huge medical complex that serves thousands of patients, visitors, medical professionals, and supports workers every day. Creating a safe, secure, and courteous atmosphere is critical for preserving the hospital's tangible assets, securing sensitive patient data, preventing workplace violence, and ensuring continuous clinical operations.

RSCM uses an integrated social safety and security management system that strikes a balance between severe physical enforcement and community-oriented, respectful public safety procedures.

5.4.1 Physical Security Management and Access Control

To maintain physical security across multiple medical towers, pavilions, and administrative zones, RSCM utilizes a layered access control strategy:



- Perimeter and Traffic Control: The hospital monitors vehicle entry and departure points on major access routes. Parking lots and public open areas are constantly monitored to control traffic flow, safeguard parked vehicles, and maintain emergency ambulance lanes available.
- Building Access Control and Visiting Policies: Trained security staff man the main clinical entrances. Strict visiting hours and visitor-pass protocols are in place to protect vulnerable patients from unauthorized contact or potential infant abduction risks, particularly in high-security areas such as Neonatal Intensive Care Units (NICU), Intensive Care Units (ICU), operating theaters, and pediatric wards.
- Surveillance Infrastructure (CCTV): To prevent theft, vandalism, and unauthorized access, a centralized security command center monitors a dense network of high-definition closed-circuit television (CCTV) cameras deployed throughout corridors, public waiting lounges, perimeter fences, and blind spots around the clock.

5.4.2 Prevention of Workplace Violence and Commotion

- Frontline Staff Protection: Healthcare professionals, particularly those working in the Emergency Department (IGD) and critical care billing/triage zones, may encounter emotionally upset family members under high stress conditions. Security professionals are strategically stationed at the IGD 24 hours a day, seven days a week to act early, deescalate tension, and address unruly conduct.
- Code Grey Protocol: RSCM uses a specialized emergency code system, known as "Code Grey," to signify a security emergency involving an aggressive individual, physical violence, or a weapon-related danger. Staff get frequent training to initiate this reaction, which ensures a quick, non-lethal tactical intervention by the hospital's internal security unit to control the area and safeguard bystanders.

5.4.3 Patient, Community and Construction Safety

The hospital stresses patient and community safety by implementing the following measures:

- Implement infection control and hygiene protocols to avoid infection transmission in hospitals.
- Preparedness plans for medical crises, natural disasters, and mass casualty occurrences, including prompt response and collaboration with local emergency services.
- Safe Transportation and Ambulance Services: Ensure emergency transport services are properly equipped and manned with skilled personnel for safe patient transfers.
- Train personnel in de-escalation tactics and implement protective measures against possible violence, including dealing with hostile patients or visitors.
- Public Safety Awareness Campaigns: Educating the population on health and safety measures, such as illness prevention, emergency procedures, and hospital access rules.
- Safety practices will be used during construction to safeguard patients, staff, and visitors from potential dangers such as noise, dust, limited access areas, and equipment movement. The measures will also target the prevention of gender-based violence (GBV) and sexual harassment by establishing clear reporting routes, worker behavior guidelines, and a visible security presence.
- ESIA Gender-Based Considerations

Table 28. Number of Patients in RSCM

No	Services	Year	Note	Total
1	**Outpatients + Emergency Department (Visitors)**	**2023**	**Total**	1.204.890
			National Health Insurance	840.710

No	Services	Year	Note	Total
			non-National Health Insurance	367.922
		2024	**Total**	1.351.826
			National Health Insurance	928.996
			non-National Health Insurance	429.212
		2025	**Total**	1.456.420
			National Health Insurance	999.613
			non-National Health Insurance	461.604
		2026	**Total**	493.198
			National Health Insurance	329.345
			non-National Health Insurance	164.986
2	**Inpatient Admissions (Inpatient Indicator Dashboard) (Monthly data from the census)**	**2023**	**Total**	41.661
			National Health Insurance	35.156
			non-National Health Insurance	5.141
		2024	**Total**	52.504
			National Health Insurance	45.027
			non-National Health Insurance	6.230
		2025	**Total**	61.679
			National Health Insurance	55.446

No	Services	Year	Note	Total
			non-National Health Insurance	6.233
		2026	**Total**	22.377
			National Health Insurance	20.126
			non-National Health Insurance	2.251
3	**Surgical Patients (dashboard+kintani)**	**2023**	**Total**	22.996
			National Health Insurance	19.216
			non-National Health Insurance	3.558
		2024	**Total**	25.782
			National Health Insurance	22.222
			non-National Health Insurance	3.458
		2025	**Total**	28.263
			National Health Insurance	24.754
			non-National Health Insurance	4.101
		2026	**Total**	9.735
			National Health Insurance	8.654
			non-National Health Insurance	1.081
4	**Actions/Procedures (IPINB)**	**2023**	**Total**	40.717
			National Health Insurance	34.228

No	Services	Year	Note	Total
			non-National Health Insurance	1.633
		2024	**Total**	39.324
			National Health Insurance	37.648
			non-National Health Insurance	1.676
		2025	**Total**	32.576
			National Health Insurance	29.967
			non-National Health Insurance	2.609
		2026	**Total**	9.735
			National Health Insurance	8.654
			non-National Health Insurance	1.081

Source: Medical Records Department, 2026

The data show that both outpatient and inpatient services are available to everybody, proving that RSCM has an inclusive and equitable healthcare system. There are no worries about gender-based inequities. The facility appears to offer equal possibilities for medical care, guaranteeing that no gender is denied access to essential health services.

1. Cyber Security and Data Privacy

In the healthcare environment, social safety and security extend to digital areas. In compliance with Indonesia's Personal Data Protection Law (*UU Pelindungan Data Pribadi or UU PDP*) and hospital policies:

- Medical record confidentiality: The Hospital Management Information System (SIMRS) secures patient medical records, administrative databases, and financial files using sophisticated firewalls, data encryption, and role-based credential access control.
- Data Breach Countermeasures: Regular cyber security assessments and internal training are carried out to avoid phishing, social engineering assaults, and illegal data releases, preserving perfect confidentiality and public trust in the national health system.

Link to ESIA

- The surge of external construction workers near crowded residential kampungs compels the ESIA to impose severe worker standards of behavior to minimize social friction, harassment, and security problems.
- Access Control and Crime Prevention: Operating a live construction zone within a public hospital requires the ESIA to implement strict security fencing, monitoring, and credential checks to prevent illegal entrance, theft, and patient safety risks.

5.5 Workers' Rights and Protection

RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) ensures that the rights of all categories of its workers—including civil servants (PNS), government contract employees (PPPK), permanent non-PNS staff, outsourced labor, and clinical residents—are fully recognized, respected, and protected.

The hospital's employment frameworks are explicitly aligned with Indonesian Labor Law (*Undang-Undang Ketenagakerjaan* No. 13/2003 and its amendments), State Civil Apparatus regulations (*UU Aparatur Sipil Negara*), and core international labor standard guidelines. This ensures a fair, dignified, and supportive environment for the entire hospital workforce.

5.5.1 Fundamental Labor Rights and Protections

a. Freedom of Association and Collective Bargaining
   - Right to Associate: In accordance with national laws, RSCM respects the rights of its employees to form or join lawful professional associations, labor unions, or internal employee forums without fear of intimidation, discrimination, or retaliatory actions.
   - Dialogue Platforms: The hospital management actively facilitates periodic bilateral communication and consultative meetings with employee representatives to discuss welfare improvement, operational safety, and workplace harmony.

b. Prohibition of Forced Labor, Child Labor, and Human Trafficking
   - Zero-Tolerance Policy: RSCM has a stringent zero-tolerance policy against all forms of forced labor, human trafficking, and child labor throughout its whole organizational structure.
   - Supply Chain and Vendor Audits: This ban applies to all third-party contractors, security organizations, cleaning agencies, catering services, and building contractors who work within the RSCM complex. All vendor agreements require signatures indicating compliance with national minimum working age and volunteer labor legislation.

c. Non-Discrimination, Harassment, Abuse and Equal Opportunity
   - Fair Workplace: RSCM encourages an inclusive work environment. Discrimination based on gender, race, ethnicity, religion, political affiliation, marital status, age, or

physical impairment is absolutely outlawed throughout all phases of employment—including recruiting, training opportunities, career progression, and remuneration structure.

- Gender Equality and Vulnerable Worker Support: The hospital aggressively promotes equal pay for equal labor, regardless of gender. Special accommodations and safety conditions are in place to safeguard pregnant and nursing staff, such as specialized breastfeeding rooms, tailored shift planning to minimize excessive night shifts, and parental leave entitlements in compliance with civil service and national labor laws.

5.5.2 Working Hours, Fair Wages, and Benefits

a. Statutory Remuneration: All staff members are adequately rewarded through organized and transparent payment processes that adhere to provincial minimum wage standards at least Rp5.729.876 (UMP DKI Jakarta) for contract individuals and standard civil service scales for government-appointed employees.

Table 29. Data, Salary and THP

Age Group	Number of Employees		Total Salary (IDR)		Total Take-Home Pay (THP) (IDR)	
	Male	Female	Male	Female	Male	Female
<30 years	161	747	260.611.913	1.179.631.602	1.227.572.389	5.409.900.014
30 - 39 years	526	1337	1.743.962.777	4.683.876.693	12.490.071.511	20.030.637.514
40 - 49 years	499	1025	2.069.264.241	4.459.804.585	17.770.129.814	21.007.309.042
> 50 years	338	621	260.611.913	1.179.631.602	1.227.572.389	5.409.900.014
Total	**1524**	**3730**	**4.334.450.844**	**11.502.944.482**	**32.715.346.103**	**51.857.746.584**

Notes :
- Based on employee data as of May 29, 2026
- Total number of employees: 5,254
- Based on payroll data for May 2026
- Performance incentives for April 2026 with total revenue of 219,674,267,795

b. Shift Management: Working schedules are strictly regulated to protect physical health, minimize professional burnout, and ensure patient safety. Overtime hours are rigorously monitored, controlled, and rewarded at legal rates.

c. Social and Healthcare Insurance: The national social security plans cover the whole formal workforce.
   - BPJS Kesehatan: For complete healthcare coverage.
   - BPJS Ketenagakerjaan: For work-related injury insurance (*JKK*), death benefits (*JKM*), old-age savings (*JHT*), and pension security (*JP*).

5.5.3 Occupational Health and Safety (K3)

RSCM prioritizes a comprehensive occupational health and safety framework (known locally as K3RS—*Keselamatan dan Kesehatan Kerja Rumah Sakit*) designed to protect its massive workforce from hospital-associated hazards. The hospital has also established several standard operating procedures (SOPs) relating to the implementation of occupational health and safety (OHS), such as the SOP on the Reporting and Investigation of Occupational Health and Safety (OHS) Incidents, Observation, Risk Control, and Documentation of Unsafe Conditions and Behaviour by Work Units, Evacuation Procedures, and Monitoring of Construction Activities in relation to OHS (Occupational Health and Safety). A more comprehensive list of SOPs can be found in Annex 8 of this report.

Table 30. Workplace Safety and Risk Exposure

Hazard Type	Description	Safety Measures
Biological Hazard	Exposure to infectious diseases, exposure to microorganisms from patients' bodily fluids, infectious waste, and medical care settings	Universal Precautions, Vaccinations, use personal protective equipment, waste management in accordance with procedures
Chemical Hazard	Exposure to hospital chemicals (disinfectants, laboratory reagents, hazardous medications)	Storage of chemicals according to classification, provision of SDS/MSDS, SOPs for handling chemical spills, and periodic inspections of storage areas
Physical Hazard	Ergonomics, radiation shielding, fire hazard, risk of injury and slipping	Providing evacuation routes, installing safety signs, using ergonomic aids, monitoring radiation exposure, inspecting electrical installations, and conducting emergency response drills.
Psychological Hazard	Stress caused by the work environment, shift work, violence, and harassment	Burnout Counseling, a balanced work schedule, Well-being Programs, reporting workplace violence

a. Biological and Chemical Hazard Management
   - Universal Precautions and Personal Protective Equipment (PPE): Employees are regularly taught in infection control methods. All high-risk units receive enough and appropriate PPE (such as N95 masks, surgical gowns, face shields, and heavy-duty gloves).
   - Immunization Programs: Clinical frontliners are required to get routine immunizations (including Hepatitis B, Influenza, and other infectious disease boosters) at no cost.
   - Post-Exposure Prophylaxis (PEP): SOPs are closely followed to address unintentional needle-stick injuries or fluid exposures, ensuring prompt medical examination, prophylactic treatment, and counseling.

b. Ergonomics, Radiation Safety, and Physical Hazards
   - Radiation Protection: Employees in the Radiotherapy, Radiology, and Nuclear Medicine departments are closely monitored with personal dosimeter badges (TLD). The use of this device is supported by the Standard Operating Procedure (SOP) for Monitoring Radiation Workers' Doses, which serves as a guideline for radiation workers to ensure they do not exceed the established dose limits. Shielding walls and equipment are subjected to stringent periodic maintenance to ensure that exposure levels remain within legal and acceptable limits. RSCM also implements the Radiation Protection SOP at the Integrated Cardioserebrovascular Care Unit as an effort to protect radiation workers, patients, and the general public from radiation hazards to the greatest extent possible.
   - Ergonomic Controls: Hospital workers receive training in safe patient handling procedures, ergonomics for lengthy standing during surgeries, and optimal posture for extensive desk/computer work.

5.5.4 Protection Against Workplace Harassment and Violence

Indonesia has enacted several laws and regulations to safeguard workers, particularly healthcare professionals, from workplace harassment, violence, and discrimination, as explained in the table below.

Table 31. Legal Basis for Protection Against Workplace Harassment and Violence

Aspect	Legal Basis	Key Provisions	Implementation in Hospitals
General Worker Protection	Law No. 13 of 2003 on Manpower	- Right to a safe work environment. - Prohibition of discrimination, harassment, and exploitation.	- Ensuring a safe hospital environment for staff. - Providing internal reporting systems.

Aspect	Legal Basis	Key Provisions	Implementation in Hospitals
Sexual Harassment & Violence	Law No. 12 of 2022 on Sexual Violence Crimes (TPKS Law)	- Criminalization of workplace sexual harassment. - Employers must provide reporting and support mechanisms.	- Establishing zero-tolerance policies. - Implementing confidential reporting systems.
Healthcare Worker Protection	Law No. 36 of 2009 on Health	- Protection against violence during medical duties. - Hospitals must provide security assistance to workers.	- Deploying security personnel in high-risk areas (ER, ICU). - Ensuring legal protection for employees.
Occupational Safety & Violence Prevention	Government Regulation No. 50 of 2012 on Occupational Health and Safety (SMK3)	- Mandatory implementation of an OHS system. - Preventive measures against workplace violence.	- Conducting training on conflict resolution and violence prevention.
Hospital- Specific Safety Regulations	Minister of Health Regulation No. 66 of 2016 on Hospital Occupational Health and Safety (K3RS)	- Hospitals must implement violence prevention programs. - Establishing a system to report and handle workplace harassment/violence.	- Creating internal security protocols. - Developing hospital- level safety guidelines.
Law Enforcement & Institutional Support	- Collaboration with Polri (Indonesian National Police) - Support from Jakarta Regional Manpower Office (Disnakertrans DKI Jakarta) - Assistance from BPJS Employment & Komnas Perempuan	- Hospitals must ensure workers can access legal protection and report abuse.	- Partnering with law enforcement for security measures. - Providing BPJS Ketenagakerjaan coverage for workplace injuries and legal support

The Jakarta Center for Women and Children's Protection (UPT PPPA) recorded 1,682 cases of violence against women and children in 2023, which involved 731 adult women and 951 children. Further, the 2024 Women's Life Experience Survey (SPHPD) indicated that 3.78% of women in the capital experienced physical and/or sexual violence in the past year.

To address this, the initiative will increase implementation of GBV prevention at the hospital level, including:

- Training staff, workers and community nearby on GBV awareness, gender sensitivity, and anti-harassment procedures.
- Create a confidential and accessible grievance resolution procedure, including a female focal point at each institution.
- Monitoring and reporting GBV-related issues while maintaining anonymity and survivor safety.
- Providing IEC materials to enhance knowledge of GBV and rights among staff and patients.

Based on current employment records at RSCM as shown in table 27, there is a significant baseline representation of women in the overall workforce. In the "Officer" sub-category (which includes nursing, administrative, and support staff), women significantly outnumber men with 3,730 female officers compared to 1,524 male officers. However, a structural variation is observed within highly specialized roles; in the "Doctor" sub-category, the representation shows 54 men and 34 women.

While the overall numbers reflect strong female participation in hospital operations, granular details regarding gender representation in top management, the existence of formal policies on gender-equal promotion, and parity in remuneration structures remain limited at this stage. Further assessment is required during the project execution to identify if vertical segregation or glass-ceiling effects exist within the institution

From an external perspective, recent public consultations indicated a relatively balanced gender ratio among participants, showing that women are actively engaged and not visibly marginalized in initial stakeholder discussions. However, broader qualitative data regarding the specific challenges faced by vulnerable women in accessing hospital services—such as awareness gaps or socioeconomic barriers—remains a data gap. Additionally, localized macro-level risks regarding Gender-Based Violence (GBV) and harassment have not yet been fully integrated into the baseline.

These strategies are outlined in the Gender Action Plan (GAP) below and will be monitored during project execution to ensure effectiveness and responsiveness to gender-based hazards.

Table 32. Gender Action Plan

Objective	Management Activity	Target / Performance Indicator	Implementation Timeline
Promote equal employment opportunities	Implement gender-inclusive recruitment, professional promotion, and workplace regulations to enhance female participation in civil works with equitable remuneration.	Formal adoption of gender-sensitive hiring policies and operational grievance mechanisms.	Pre-construction phase & Ongoing
Strengthen women's participation in consultations and decision-making.	Organize dedicated Focus Group Discussions (FGDs) specifically tailored for female stakeholders.	Minimum 40% representation of women among all FGD participants.	Project Planning & Pre-construction
	Actively involve women within stakeholder engagement forums, community liaison groups, healthcare staff, and local communities.	Female representation in community and stakeholder consultation groups reaches at least 30%.	Entire Project Lifecycle
Improve access to services for women & vulnerable groups	Design and construct hospital and public infrastructure incorporating gender-sensitive access (including dedicated lactation rooms and separate sanitation facilities).	Successful deployment of inclusive and accessible facilities on-site.	Detailed Design Phase
	Provide tailored operational information regarding health, safety, and welfare, with specific emphasis on maternal/reproductive health and Gender-Based Violence (GBV) support.	Total volume of Information, Education, and Communication (IEC) materials specifically customized to address women's needs.	Construction & Operational Phases
Prevent gender-based violence (GBV) and harassment; ensure safety during construction	Conduct mandatory training sessions on gender sensitivity and anti-harassment frameworks for all medical personnel, contractors, and site workers to combat GBV and sexual harassment.	100% of the project workforce undergoes mandatory training.	Pre-construction phase & Repeated Annually

Objective	Management Activity	Target / Performance Indicator	Implementation Timeline
	Set up a secure, GBV-responsive grievance redress framework, enforce a mandatory worker Code of Conduct, and distribute GBV prevention materials across construction zones and neighboring areas.	Fully operational and confidential grievance mechanism managed by a designated female focal person.	Established early; continuous monitoring throughout the project
Expand community health access	Execute community health outreach programs and health awareness campaigns targeted at women residing in surrounding neighborhoods.	Minimum of one dedicated outreach event organized per year with at least 60% female attendance.	Operational Phase
Monitor gender-responsive outcomes	Systematically gather, analyze, and report sex-disaggregated data concerning the direct beneficiaries of the project.	The comprehensive database tracks the number of male and female patients utilizing modernized services and upgraded diagnostic equipment.	Construction & Operational Phases

5.6 Vulnerable Groups

Certain groups within the Project's Area of Influence (AoI) risk being disproportionately affected by the construction and modernization of the RSCM complex, requiring targeted mitigation measures:

a. Informal Workers (Street Vendors): Traders (±95 street vendors) operating along the adjacent Salemba-Diponegoro corridors face and Kimia Street, potential livelihood and workspace disruptions due to project zoning reconfigurations. In compliance with the Job Creation Law, social impact handling and financial grant eligibility depend on continuous land-use verification by local authorities. The hospital is committed to a "No-Eviction" policy (no forced evictions) and plans to provide temporary relocation sites that are suitable and remain accessible to patients.
b. Patients with Limited Mobility and the Elderly: As a national apex referral hospital, RSCM handles a high volume of elderly, pregnant, and disabled visitors. These individuals are highly sensitive to physical barriers, pedestrian detours, and construction dust, mandating strict compliance with universal design standards. Based on the data of 2025, RSCM had visitors or patients of elderly for 281,623 people.

c. Women and Female Medical Staff: This group (3766 people) faces heightened safety and security risks near active zones due to the influx of an external construction workforce. Prevention mandates gender-sensitivity training for 100% of the project workforce, a zero-tolerance Worker Code of Conduct, and a secure, confidential grievance mechanism.
d. High-Risk Hospitalized Patients: Patients in neighboring critical wings—such as Intensive Care Units (ICU), neonatal wards, and operating theatres—are exceptionally vulnerable to low-frequency vibrations, heavy noise, and airborne dust. Protecting them requires advanced engineering controls like negative-pressure isolation and strict scheduling of heavy civil works. Based on the data of 2025, RSCM had visitors or patients of ICU for 1,314 people, and neonatal of 969.

Link to ESIA (Mitigation Requirements):

- Livelihood Protection: Requires the ESIA to enforce structured livelihood restoration programs or alternative space relocation for directly affected informal vendors (street vendors), including a layout that allows access for street vendors during construction.
- Universal Access and Safety Engineering: Forces the ESIA to mandate absolute compliance with inclusive facility designs (e.g., continuous tactile paving, accessible ramps, and separate gender-sensitive sanitation/lactation rooms) and the installation of heavy-duty dust and acoustic barriers throughout the construction lifecycle.

5.7 Sensitive Areas and Traffic Management

Certain areas and institutions within the Project's Area of Influence (AoI) risk being significantly and disproportionately affected by the construction and modernization of the RSCM complex, necessitating strict mitigation measures and rigorous traffic engineering management:

- Emergency Ambulance Access Protection: The primary gate on the Salemba-Diponegoro axis is a high-sensitivity receptor. Any traffic bottleneck caused by slow-moving logistics trucks, concrete mixers, or material loading will directly delay critical emergency vehicles during the "golden hour" of patient care.
- Public Transport Corridor Interruption: The project directly borders the active TransJakarta busway lane. The operations of concrete pouring mixers and heavy excavation transport must be strictly regulated to prevent encroachment into public transport lanes or structural damage to adjacent public bus stops.
- The existing parking lot owned by RSCM currently measures 14,075 m^2, divided into a motorcycle parking area measuring 1.5 m^2 × 1,500 equivalent to 2,250 m^2 while the car parking area measures 12.5 m^2 × 946, for a total of 11,825 m^2. With this parking area, the parking capacity for motorcycles can reach 1,500 parking spaces and 946 parking spaces for cars. With the construction of this project, parking capacity will be increased based on the calculated ratio of parking space requirements to the increase in the number of hospital beds.
- Active Healthcare and Educational Facilities: Active clinical wings (such as the Kirana Building and the Main Inpatient Unit) along with the FKUI educational complex are located within a

radius of < 50 meters from the construction zone. These areas are exceptionally sensitive to noise pollution, airborne dust, and physical vibrations from heavy machinery.

- Local Residential Areas: Dense urban residential settlements (such as in Kelurahan Kenari and Pegangsaan) and the street vendors in the surrounding of the RSCM area that share direct boundaries with the project perimeter are highly vulnerable to dust suspension, potential groundwater quality degradation, and acoustic disturbance caused by night-shift construction works.

Link to ESIA (Mitigation Requirements)

- Mandatory Traffic Management Plan (TMP): The ESIA requires the contractor to implement a comprehensive TMP approved by the Jakarta Transportation Agency (Dishub DKI). This includes establishing internal holding bays within the project footprint to completely prevent illegal truck queuing on public roads.
- Work Scheduling and Peak-Hour Restrictions: Heavy machinery mobilization, soil debris hauling, and large-scale material deliveries are strictly confined to night shifts (22:00–05:00) to prevent gridlocks and avoid paralyzing localized urban traffic during daytime peak hours.
- Increase in parking capacity based on the number of beds to be added
- Environmental Engineering Controls: The ESIA mandates the installation of heavy-duty dust enclosures and acoustic barriers along the construction perimeter, alongside the compulsory operation of high-pressure wheel-washing bays for all project vehicles before they exit onto public asphalt roads.

5.8 Gender Based Violence

As Indonesia's primary national referral and teaching hospital, RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) is dedicated to ensuring a workplace and healthcare environment free of all forms of gender-based violence (GBV), sexual exploitation and abuse (SEA), and sexual harassment (SH).

RSCM has a firm zero-tolerance policy for any sort of misbehavior, abuse, or unequal power dynamics that result in sexual damage, discrimination, or psychological trauma. This protection is applicable to all patients, visitors, medical and administrative staff, third-party contracted professionals, and clinical students/residents (PPDS).

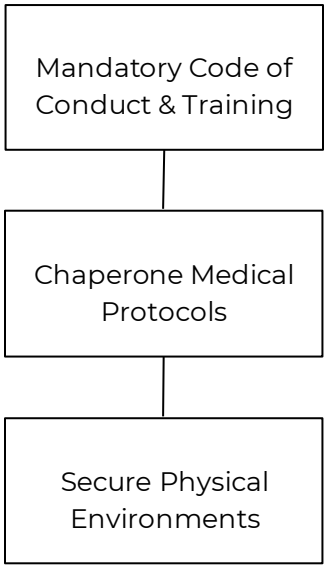
To ensure complete organizational clarity and compliance with Indonesia's Sexual Violence Crime Law (*UU Tindak Pidana Kekerasan Seksual* or UU TPKS No. 12/2022), RSCM defines and actively prevents the following vulnerabilities:

- Gender-Based Violence (GBV) is defined as any damaging act committed against a person's will and motivated by socially imposed (i.e., gender) disparities between males and females.
- Sexual exploitation and abuse (SEA) refers to the real or attempted misuse of a position of vulnerability, unequal authority, or trust for sexual motives. This includes cases in which

clinical authority, academic grading power, or administrative control is used to get sexual favors.

- Sexual Harassment (SH) is defined as unwanted sexual approaches, demands for sexual favors, and other sexually-related verbal, nonverbal, or physical behavior that creates an intimidating, hostile, or offensive work or clinical environment.

Based on the data of admitted cases in RSCM from 2021 to 2025, there were 624, 710 and 331 recorded cases for GBV, SEA, and SH respectively. Hence, RSCM establishes robust preventative networks divided across structural protection, code of conduct enforcement, and continuous education:



a. Mandatory Code of Conduct and Training

- Explicit Behavioral Agreements: Every employee, clinical consultant, outsourced contractor, and medical resident must sign an official Code of Conduct that expressly bans all forms of sexual misconduct, harassment, and exploitation.
- Regular Awareness Campaigns: The hospital's human resources department and the Medical Ethics Committee perform mandatory orientation and regular training programs to educate professionals on bodily boundaries, clear patient-provider professional boundaries, and signs of abuse.

b. Clinical Care Guardrails (Medical Chaperone System)

- The Medical Chaperone System is absolutely mandated by RSCM to safeguard both patients and medical practitioners during intimate clinical exams, diagnoses, and therapeutic procedures.
- A third person—usually a nurse or a healthcare professional of the same gender as the patient—must be present in the examination room for sensitive physical checks to ensure accountability and a safe, dignified medical environment.

c. Environmental and Physical Safety Infrastructure

- Lighting and Security Patrols: The hospital guarantees that all hallways, underground parking facilities, public bathrooms, and distant rest spaces for night shift personnel are well-lit and monitored by security cameras (CCTV).
- Restricted Staff Access: Secure access control systems separate dedicated staff lounges and on-call rooms, ensuring privacy and security for overnight medical workers.

d. Reporting, Whistleblowing, and Survivor Support Mechanisms

- Independent and private Reporting Channels: The Hospital Ethics and Legal Committee and RSCM's integrated Whistleblowing System (WBS) provide a safe, private internal structure. Victims and bystanders can report occurrences without fear of professional repercussions, grade consequences, or revenge.
- Integrated Victim Support Links (PPT/P2TP2A): RSCM, an advanced center for clinical excellence, provides specialized medical and psychological emergency solutions. If a case of GBV happens or is presented to the hospital, the patient/staff member will get prompt clinical treatment, trauma-informed psychological therapy, and safe, coordinated referrals to local legal assistance and external social agencies.
- Disciplinary Action and Legal Enforcement: All proven infractions are subject to an extensive, fair internal administrative investigation. Under the UU TPKS, confirmed violators face prompt dismissal, contract termination, loss of clinical practice rights, and direct reference to legal authorities.

5.9 Impact on Surrounding Communities and Tenants

Unlike new greenfield developments, RSUP Nasional Dr. Cipto Mangunkusumo (RSCM) is a long-established, historic medical institution operating within its existing footprint in Central Jakarta. Any modernization, vertical expansion, or infrastructural upgrades (such as building new medical towers or optimizing utility facilities) are conducted strictly within land legally owned by the hospital or state assets managed under the Ministry of Health.

Since the hospital is bounded by high-density urban settlements (kampungs), administrative offices, and busy transit corridors in the Senen and Menteng districts, localized socio-environmental impacts on the surrounding communities must be carefully managed.

To prevent temporary economic displacement, the hospital guarantees that construction logistics and fencing will not persistently obstruct neighboring businesses, instead deploying clear signage, alternative pedestrian pathways, and advanced schedule notifications to minimize interruptions to local economic activity.

1. Physical and Economic Displacement Risk Assessment

   a. Physical Resettlement (Involuntary Resettlement)

- Risk Baseline: If some buildings have been demolished and lessees/tenants will be affected. There are 3 tenants identified that still have a contract with RSCM. 1 Tenant has a contract for two ATM Machine that will end by 31 December 2026 in Administration building and CMU 1 building. 1 Tenant has a contract for Bank office that will end by 12 February 2029 in Administration building, and 1 Tenant has a contract for BTS (Base Transceiver Station) in CMU 1 building.
- Mitigation Measures: Compensation and livelihood restoration measures shall be provided to affected persons, as applicable, including compensation for the loss of assets or improvements made by lessees or occupants, return of rental deposits, refund of prepaid rent for any unused rental period, transitional assistance to facilitate relocation to alternative premises, transportation assistance for moving, additional assistance or allowances for vulnerable individuals or households, and any other necessary support to restore affected persons' living standards and livelihoods.

b. Temporary Economic Displacement
   - Context: Construction logistics, temporary fencing, and utility trenches within the hospital's perimeter may temporarily limit access to surrounding small enterprises, kiosks, or informal transportation providers. Approximately 95 informal micro-vendors (Pedagang Kaki Lima / PKL) operating along the perimeter.
   - Mitigation Measures:
     - The hospital guarantees that building operations do not persistently obstruct access to neighboring premises. To minimize interrupting local economic activity, clear signs, alternate pedestrian approaches, and advanced socialization of structural timetables have been used.
     - Advance Socialization and Census Cut-Off Date: Conduct formal consultations at least 30 days prior to site mobilization to establish a verified vendor census and cut-off date, ensuring existing eligible vendors are protected from arbitrary eviction.
     - Phased Construction and Alternate Access Wayfinding: Install clear signage, well-lit temporary pedestrian boardwalks, and managed hoarding to maintain pedestrian foot traffic toward surrounding vendors during civil works.
     - Temporary Relocation / Livelihood Restoration Plan: Provide designated temporary vending spaces nearby or offer transitional livelihood assistance/monetary compensation for vendors whose operations are completely halted during active excavation.
     - Post-Project Inclusion: Explore options under the hospital's spatial planning to integrate regulated micro-vendor zones or cooperative spaces in the post-construction layout.
     - Dedicated Grievance Channel: Establish a direct, accessible grievance mechanism for informal traders to report immediate physical obstructions or loss of access caused by contractor activities.

c. Socio-Economic Impact Assessment
   - During Construction (High Impact): dust/noise generation will physically restrict pedestrian access and eliminate vendor setup space. This is estimated to cause a temporary revenue decline of 30% to 50% for directly affected vendors if unmitigated, alongside risks of forced displacement by local enforcement authorities due to site clearance.
   - Post-Construction (Positive/Neutral Impact): Once construction is completed, modernized pedestrian walkways and improved perimeter aesthetics are expected to restore foot traffic. However, without designated vendor zoning, permanent displacement risks remain if post-project spatial reconfigurations exclude informal trade.

d. Local Government and RSCM Plan regarding Relocation
   In alignment with the Central Jakarta City Government (*Pemerintah Kota Administrasi Jakarta Pusat*) urban management policies:
   - No Permanent Relocation Planned: There is no planned permanent displacement or eviction of these street vendors for the project.

Site Management Strategy: Vendors will remain in their current operational corridors where physically feasible. However, during active civil works along specific fence boundaries, temporary micro-shifts or localized boundary adjustments will be coordinated jointly by RSCM and the Central Jakarta Sub-district (*Kecamatan Senen/Menteng*) to ensure site safety without completely shutting down their livelihoods.

2. Socio-Environmental Impacts on the Surrounding Community
   While physical displacement is avoided, construction and operational phases can project external disruptions onto the immediate urban neighborhood.

   a. Nuisance from Construction Activities (Noise, Vibration, and Dust)
      - Impact Analysis: Excavation, heavy vehicle movement, and structural work can generate noise and dust that distress nearby residents, schools, or offices.

      - Mitigation Measures: Installation of heavy-duty, high-boundary noise curtains and dust screens along perimeter fences adjacent to local houses.
        - Prohibition of heavy, high-vibration construction activities during night hours (typically restricted from 22:00 to 06:00 WIB) to respect community rest periods.
        - Routine water spraying on dry soil surfaces and truck wheel washing before vehicles exit the RSCM construction zone into public roads.

   b. Traffic Influx and Access Disruptions
      - Impact Analysis: high trucks transporting materials or dirt may increase the already high traffic on Jalan Pangeran Diponegoro, thereby delaying local commuters and interrupting neighborhood access.

- Mitigation measures include scheduling material delivery strictly during off-peak traffic hours (late night or early morning). Deploying skilled traffic flaggers (packers) to collaborate with local transportation authorities and guarantee smooth entry/exit movements without congested public transit routes.

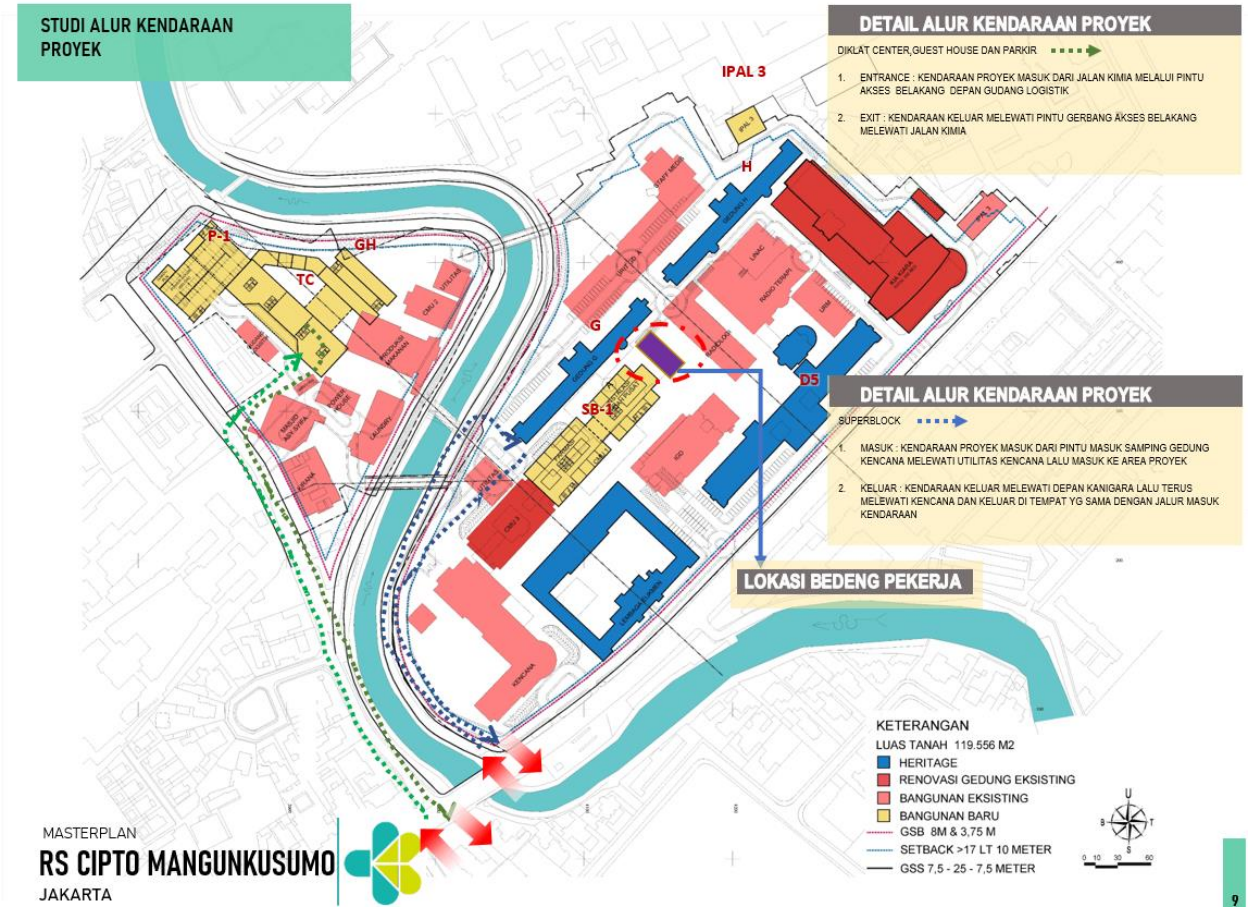
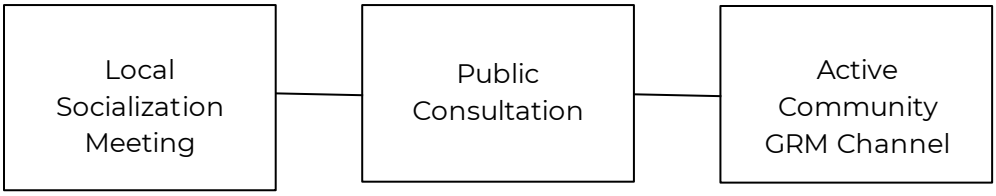


Figure 25. Project Vehicle Flow Plan

3. Community Engagement and Grievance Redress Mechanism (GRM)
   RSCM bridges the relationship with its neighbors through a dedicated communication and complaints architecture to address community anxieties proactively:



   a. Prior Socialization: Before any significant structural alteration or growth begins, RSCM has formal public socialization sessions with local community leaders, including sub-

district heads (Lurah), district chiefs (Camat), and neighborhood representatives (RT and RW).

b. Community Grievance Redress Mechanism (GRM): A separate community liaison channel is established. Residents in the surrounding area can contact the hospital's Public Relations (Humas) office with concerns about structural cracks (caused by vibration), excessive dust, or obstructed access.
c. Redress Framework: All complaints are recorded, analyzed within 48 hours, and resolved through corrective steps (for example, altering building practices or correcting localized structural damage to surrounding walls at the project's expense), guaranteeing long-term social peace.

Existing Institutional GRM System at RSCM

RSCM operates an established, hospital-wide Grievance Redress Mechanism primarily focused on healthcare services, patient relations, and general operational feedback.

- Governance and SOP Framework: Managed under the Public Relations & Customer Relations Division (*Humas & Layanan Kelangganan*) guided by internal Standard Operating Procedures (SOPs) on Public Complaints and Internal Complaints. These might include Director General Regulation of RSCM No: HK.02.03/4.2/34184/2021 on the Handling of Complaints, Conflicts, and Differences of Opinion at RSCM, SOP on the Handling of Complaints or Grievances and Conflicts During Working Hours No. OT.02.02/D.IX/970/2025, SOP on the Handling of Complaints or Grievances and Conflicts Outside Working Hours No. OT.02.02/D.IX/2885/2023, SOP on Handling Complaints through Social Media No. OT.02.02/D.IX/98/2025, SOP on the Collection of Customer Complaint Data No. OT.02.02/D.IX/97/2025, Work Instruction on How to Complete the Complaint Barcode No. OT.02.03/D.IX.5/431/2025.
- GRM Channels and Public Disclosure: Complaints are received via multi-channel access points including on-site Information/Complaint Desks (*Kotak Saran/Sentra Layanan*), official hotline (1500-135), email, WhatsApp complaint lines (081953354047), and national public service portals (*SP4N-LAPOR!*). System availability is disclosed publicly on notice boards, hospital websites, and social media platforms.
- Staffing and Escalation: Managed full-time by dedicated Public Relations (*Humas*) officers who log, categorize, and route grievances to relevant operational units or the Ethics/Legal Committee.

Table 33. Hystorical Complain Data

Metric / Parameter	Historical Record (2021–2025/2026)
Total Complaints Received	Approximately *[120–150]* complaints annually (predominantly service-related).
Primary Complaint Types	Clinical wait times (45%), parking/traffic access (30%), administrative processes (15%), facility noise/maintenance (10%).
Primary Channels Used	Call Center/Hotline (40%), SP4N-LAPOR! (25%), Direct On-site Desk (20%), Email/Digital (15%).

Metric / Parameter	Historical Record (2021–2025/2026)
Response & Resolution Time	Initial response within 24–48 hours; resolution reached within 3 to 7 working days for standard grievances.
Resolution Status	92% Closed/Resolved, 5% Followed up/Under Investigation, 3% Pending/Unresolved (mostly complex inter-agency issues like public road traffic).

Table 34. Evaluation of Existing GRM Strengths and Weaknesses (E&S GAP Analysis)

Aspect	Strengths	Weaknesses / Gaps for Project ESIA
Institutional Capability	Well-staffed Humas team; established SOPs for patient and customer service feedback.	Highly hospital-centric; lacks specialized procedures for civil construction impacts (e.g., structural vibrations, dust, noise, GBV/SEA/SH).
Accessibility for Community	Accessible to patients and visitors within hospital facilities.	Inaccessible or unknown to external informal stakeholders, such as surrounding street vendors (*PKL*) and adjacent *kampung* residents.
Gender and Confidentiality	Standard patient confidentiality protocols exist.	Lacks a dedicated, confidential, female-led GRM pathway tailored for sensitive Gender-Based Violence (GBV/SEA/SH) reports from project workers or local women.
Contractor Integration	Direct coordination with internal hospital maintenance.	No formal linkage between RSCM Humas and the EPC Contractor's site manager/C-ESMP team for immediate construction-related fixes.

5.10 Physical Cultural Resources and Cultural Heritage

RSUP Nasional (RSUPN) Dr. Cipto Mangunkusumo (RSCM) is not only the primary national referral healthcare center, but it is also a historical landmark that bears mute testimony to the start of modern medical education in Indonesia. The Dutch East Indies government established it in late 1919 under the name Centrale Burgerlijke Ziekenhuis (CBZ).

Since 1920, all educational facilities of School tot Opleiding van Inlandsche Artsen (STOVIA) have been transferred to the existing old buildings on Jalan Salemba Raya No. 6, and the facility has been fully operational as an educational hospital. Its façade retains a strong classical European

colonial architectural style, as seen by its mostly white color scheme, oval doors, big windows, and the presence of a monument of Dr. Cipto Mangunkusumo in the area.

The refurbishment and extension of the historic hospital complex must be carefully balanced with the preservation of its cultural historical value and architectural uniqueness. This report seeks to identify the risks posed by construction activities to the physical structure of the Rumah Sakit Cipto Mangunkusumo heritage buildings, as well as to develop a comprehensive mitigation strategy to ensure that the historical value of this former Centrale Burgerlijke Ziekenhuis (CBZ) complex is preserved.

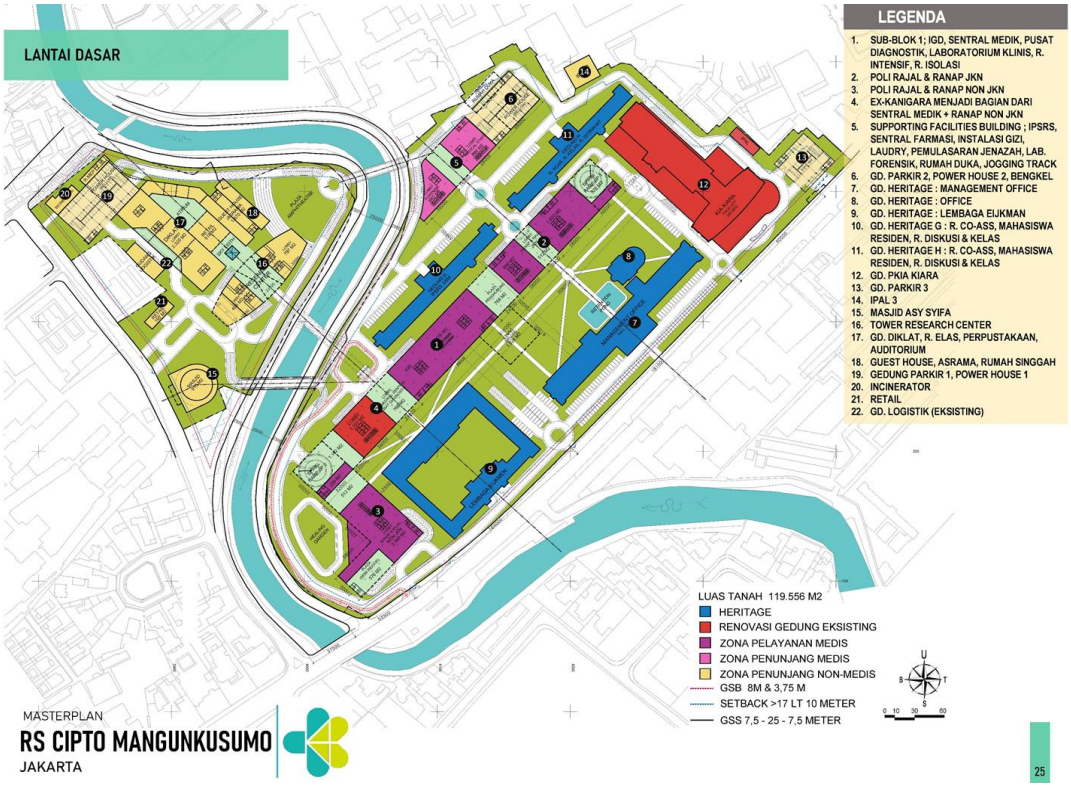


Figure 26. Heritage Area on RSCM Project Area (Blue Color)
Source: RSCM Masterplan, 2026

The RSCM development project phase I for the 2025–2040 period involves the construction of four major buildings in close proximity to the former *Centrale Burgerlijke Ziekenhuis* (CBZ) cultural heritage structures. Given RSCM's status as a Cultural Heritage Building (Jakarta Governor Decree No. 475 of 1993), this analysis identifies structural and artifactual risks and establishes strict mitigation protocols to maintain the integrity of cultural heritage during the construction phase.

To comply with the environmental and social management standards required by the Asian Infrastructure Investment Bank (AIIB) Environmental and Social Framework (ESF), RSUPN Dr. Cipto Mangunkusumo (RSCM) is committed to protecting and managing the physical cultural resources (PCR) located within the premises of the RSCM Redevelopment Project. This assessment has been

prepared in strict alignment with the AIIB ESF, while also integrating Good International Industry Practice (GIIP), specifically the World Bank's Environmental and Social Standard 8 (ESS8: Cultural Heritage).

Furthermore, the scope of these PCRs also encompasses cultural heritage as stipulated under the Law of the Republic of Indonesia Number 11 of 2010 concerning Cultural Conservation and Jakarta Governor Decree (*SK Gubernur*) Number 475 of 1993, which formally designates the RSCM complex as a protected heritage site. This includes buildings, structures, sites, and cultural conservation areas that must be preserved due to their importance for history, science, education, religion, and culture, including those physical cultural resources that have not yet been formally designated through government mechanisms.

5.10.1 Identification of Physical Cultural Resources

Based on historical data, historical spatial analysis of the RSCM complex, and the Governor's Decree (SK Gubernur), several buildings and spatial components are identified as Cultural Heritage assets requiring protection during redevelopment activities. The heritage objects that are the primary focus of protection within the construction area includes:

- Integrated Outpatient Service Unit (*Instalasi Pelayanan Rawat Jalan Terpadu*/ IPRJT) (6) (Former CBZ Main Façade): The front building facing Jalan Diponegoro/Salemba, which represents the colonial architectural style.
- Internal Medicine Building (5)
- Eijkman Institute Building (10): Office building constructed between 1911-1914, designed in the *Nieuwe Kunst* architectural style.
- G and H Building (28, 29, 30): Historic building used as discussion room, classroom, and resident student room.
- Landscape Features and Monuments: The area surrounding the statue of dr. Cipto Mangunkusumo, which serves as an important symbol of the hospital's identity.

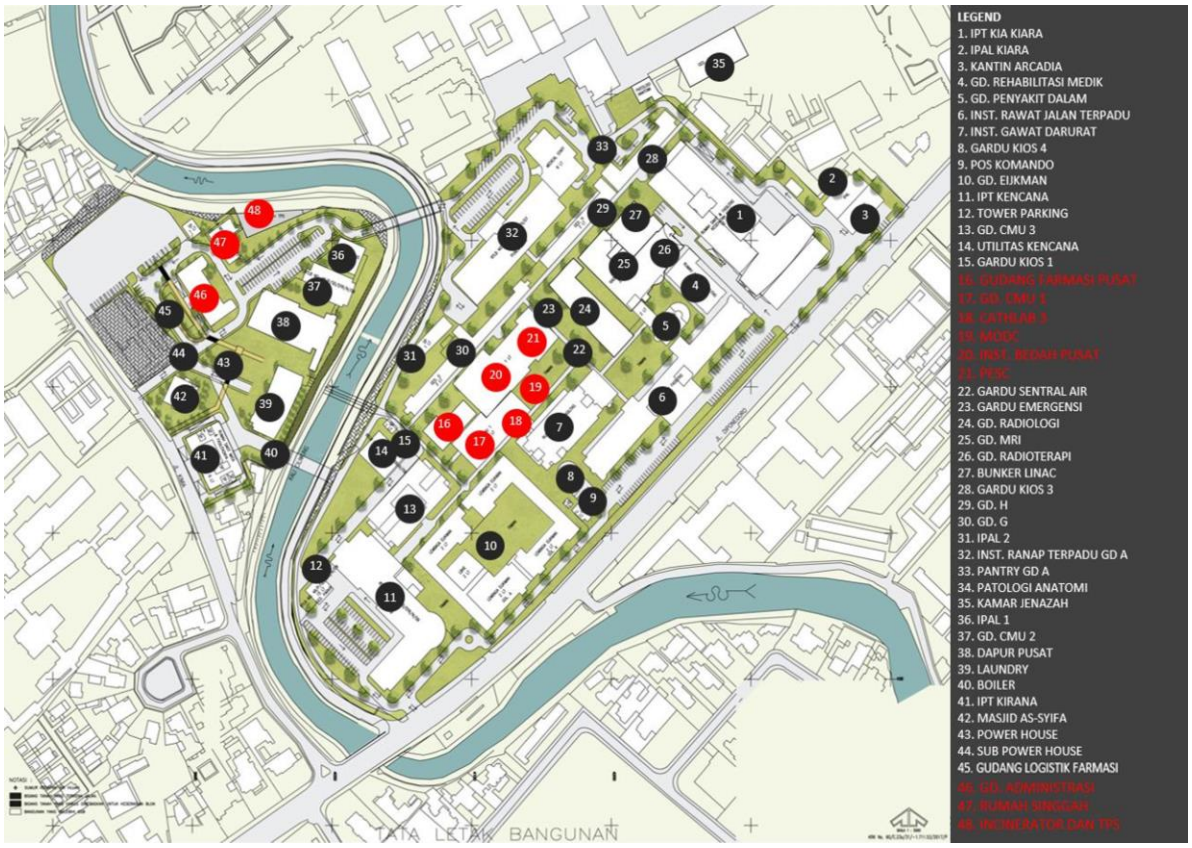


Figure 27. Block Plan Existing, the Phase I Demolition Buildings Map

Based on the RSCM Cultural Heritage Inventory Data and the heritage map presented in Figure 26, the buildings identified for Phase I demolition are not among the individually designated heritage buildings identified within the RSCM complex. This has been cross-checked against the Phase I demolition buildings map presented in Figure 27. The Pharmaceutical Liquids Building and MODC Building proposed for demolition are therefore not identified as individually designated Cultural Heritage Buildings. Nevertheless, considering the heritage designation and the presence of designated heritage buildings within the RSCM complex, demolition activities shall be undertaken in accordance with applicable cultural heritage requirements, with the required confirmation and/or clearance from the relevant heritage authority obtained prior to demolition. Where asbestos-containing materials (ACM) are present in the buildings to be demolished, their removal and disposal shall be managed in accordance with the applicable hazardous materials requirements prior to and during demolition.



Figure 28. The Heritage Buildings of RSCM

Table 35. Preliminary Assessment of Heritage Sensitivity

No	Heritage Element	Heritage Status	Condition	Significance Level	Sensitivity to Project Activities	Remarks
5	Gedung Penyakit Dalam	Cultural Heritage Building	Good	High	High	Historic health facility
6	Instalasi Pelayanan Rawat Jalan Terpadu (IPRJT)	Cultural Heritage Building	Good	High	High	The front building facing Jalan Diponegoro/ Salemba, which represents the colonial architectural style and historic identity of RSCM

No	Heritage Element	Heritage Status	Condition	Significance Level	Sensitivity to Project Activities	Remarks
10	Eijkman Institute Building	Cultural Heritage Building	Good	High	High	Principal historic identity of the RSCM constructed between 1911 – 1914 which represents the *Nieuwe Kunst* architectural style
28, 29, 30	G and H Building	Cultural Heritage Building	Good	High	High	Historic institutional office building used as discussion room, classroom, and resident student room.

Source: Data Inventarisasi Bangunan Cagar Budaya, 2024

Note: "High" significance reflects the legal heritage designation and documented historical, architectural, scientific, educational and cultural values of the heritage assets. The sensitivity rating is a project-specific assessment based on the vulnerability of the heritage assets and their potential exposure to project activities, including demolition, excavation, piling, vibration, ground movement and dust. The sensitivity classification is not a statutory classification prescribed by AIIB or Indonesian cultural heritage regulations.

Sources: Law of the Republic of Indonesia No. 11 of 2010 concerning Cultural Heritage; applicable Jakarta Governor Decrees; RSCM existing-condition documentation; and Project masterplan and demolition layout.

Based on the RSCM Masterplan of the AIIB TRUST Project, the construction work phase 1 includes the demolition of 9 buildings namely Central Pharmacy Warehouse, CMU 1 Building, Cathlab 3, MODC Building, Central Surgical Installation, PESC Building, Administration Building, Rumah Singgah and Incinerator and TPS.

Although these buildings are not currently identified as the primary protected cultural heritage, several may still contribute to the historical layering and institutional continuity of the RSCM complex. Accordingly, demolition activities shall remain subject to heritage-sensitive assessment, documentation, and mitigation procedures.

5.10.2 Potential Impact Assessment

The implementation of redevelopment project (such as basement excavation or the construction of new high-rise buildings) within the Rumah Sakit Cipto Mangunkusumo area poses several risks to the cultural heritage assets:

- Structural Risks Due to Vibrations: The use of heavy equipment (such as pile-driving machinery) around the Salemba and Diponegoro areas may generate vibrations that could crack aging walls and damage the foundations of the former CBZ buildings.
- Risks Associated with Underground Excavation (Earthworks): Site clearing and foundation excavation activities may inadvertently disturb or damage physical cultural resources (PCR), including early 20th-century building foundations or buried medical artifacts that have not yet been previously mapped.
- Landscape and Aesthetic Risks: The construction of new structures with overly futuristic designs may visually dominate and overshadow the colonial architectural value of the main heritage buildings.

Table 36. Assessment of Potential Heritage Impacts from Redevelopment Activities

Activity	Potential Impact	Affected Heritage Element	Risk Level
Demolition Activities	Structural vibration and cracking	Former CBZ Buildings	High
Basement Excavation	Settlement and subsurface disturbance	Heritage buildings foundation	High
Piling and Heavy Equipment	Structural stress	Historic masonry buildings	High
High-rise construction	Visual domination	Historical buildings setting	High
Earthworks	Archaeological disturbance	Subsurface cultural remains	Moderate to High
Construction Traffic	Physical obstruction and accidental damage	Heritage circulation areas	Moderate
Dust and Pollution	Surface deterioration	Historic façades and surfaces	High

Source: Consultant analysis, 2026

Table 37. Demolition-related Heritage Impact Assessment

Building Number	Structure Proposed for Demolition	Relationship to Heritage Area	Potential Heritage Impact	Impact Magnitude	Remarks
16	Central Pharmacy Warehouse	Located adjacent to the G Heritage Building	Potential construction disturbance including debris/demolition materials to G Building	High	Strict dust and vibration control measures recommended as well as debris handling
17	CMU 1 Building	Located adjacent to the Eijkman Heritage Building	Potential construction including debris/demolition materials disturbance to Eijkman Building	High	Strict dust and vibration control measures recommended as well as debris handling
18	Cathlab 3	Located adjacent to the Eijkman Heritage Building	Potential construction disturbance including debris/demolition materials to Eijkman Building	High	Strict dust and vibration control measures recommended as well as debris handling
19	MODC Building	Located within the heritage area	Minimal Direct Impact	Moderate	Dust and vibration control measures recommended
20	Central Surgical Installation	Located adjacent the G Heritage Building	Potential construction disturbance including debris/demolition materials to G Building	High	Strict dust and vibration control measures recommended as well as debris handling
21	PESC Building	Located adjacent to the G Heritage Building	Potential construction disturbance including debris/demolition materials to G Building	High	Strict dust and vibration control measures recommended as well as debris handling
46	Administrati on Building	Located within the service area with no identified heritage building nearby	No direct impact	Low	Standard demolition procedure acceptable

Building Number	Structure Proposed for Demolition	Relationship to Heritage Area	Potential Heritage Impact	Impact Magnitude	Remarks
47	Rumah Singgah	Located within the service area with no identified heritage building nearby	No direct impact	Low	Standard demolition procedure acceptable
48	Incinerator and TPS	Located within the service area with no identified heritage building nearby	No direct impact	Low	Standard demolition procedure acceptable

Source: Consultant Analysis, 2026

Note: Building numbers presented in table above correspond to the building identification numbers shown in figure 27.

5.10.3 Mitigation and Management Planning

To minimize adverse impacts on Cultural Heritage assets and Physical Cultural Resources within the RSCM complex, mitigation measures shall be implemented throughout the pre-construction, construction, and post-construction phases. The specific responsibilities for executing and overseeing these measures are summarized in the Responsibility Matrix at the conclusion of this section.

1. Pre-Construction Mitigation Measures

   Prior to construction and demolition activities, the project shall undertake comprehensive documentation and preparatory measures.

   1.1 Baseline Documentation and Surveys:
   - Photographic and facade documentation of affected structures.
   - Measured recording of all heritage assets within the potential impact zone.
   - Crack mapping and baseline structural condition surveys

   1.2 All contractors and workers shall receive mandatory heritage awareness training and induction regarding:
   - Identification of restricted heritage zones.
   - Safeguarding measures standard.
   - Implementation protocols for Chance Find Procedures.

1.3 Stakeholder and Authority Consultation:

To ensure alignment with statutory heritage regulations and AIIB standards, the Project Management Unit (PMU) will retain a multi-disciplinary Independent Heritage Expert Team to oversee all cultural preservation efforts. This specialized team shall comprise:

- A Historian: Responsible for verifying historical significance, managing baseline documentation, and ensuring the institutional continuity of the RSCM complex is preserved.
- A Conservation Architect/heritage structural engineer: Responsible for designing and approving structural decoupling plans, monitoring the structural integrity of historic masonry, and supervising any conservation-appropriate repairs.
- An Archaeologist: Responsible for managing subsurface risks, conducting immediate site assessments, and determining mitigation measures if underground artifacts or foundations are discovered during earthworks.

This Expert Team, alongside the PIU, shall formally present the Environmental and Social Management Plan (ESMP) to the Jakarta Cultural Heritage Team (*Tim Ahli Cagar Budaya*/TACB) and the DKI Jakarta Provincial Cultural Service (Dinas Kebudayaan Provinsi DKI Jakarta). Formal statutory approval for the demolition method statements, structural decoupling plans, and spatial zoning parameters will be secured from these agencies prior to the commencement of any physical work.

2. Construction Phase Mitigation Measures

2.1 Heritage Protection Zoning and Spatial Parameters

In accordance with the Law of the Republic of Indonesia No. 11 of 2010 (*UU Nomor 11 tahun 2010*) concerning Cultural Conservation (Articles 72 and 73), the safeguarding of heritage sites must be managed through a formally established spatial zoning system comprising a Core Zone, a Buffer Zone, and a Development. Furthermore, some of the RSCM buildings are legally protected under Jakarta Governor Decree (SK Gubernur) No. 475 of 1993.

Given that statutory laws do not prescribe fixed metric distances, as heritage sites vary significantly in scale and structural vulnerability, the spatial radius proposed in this ESIA are established based on a synthesis of international geotechnical best practices and heritage conservation guidelines. The metric parameters are adopted from DIN 4150-3 guidelines regarding vibration attenuation from heavy construction equipment, as well as the ICOMOS Guidance on Heritage Impact Assessments for maintaining visual integrity in dense urban environments.

These proposed perimeters serve as the primary operational baseline for construction safety, ensuring that high-impact activities are kept at a safe distance from historic masonry. The final spatial boundaries will be subject to definitive review and validation by the local Cultural Heritage Expert Team (TACB) prior to construction.

The proposed heritage zoning distances have been developed based on a site-specific assessment of the RSCM complex and the relationship between the designated heritage buildings and the proposed development and demolition areas. The zoning considerations take into account the location and proximity of heritage buildings to the proposed works, the identified heritage values and significance of the buildings, their age and architectural characteristics, as well as the potential physical, structural, visual, and vibration-related impacts associated with construction activities. Accordingly, the Core, Buffer, and Development Zones presented below are proposed project-specific management measures for the protection of the identified heritage assets during demolition and construction activities.

Table 38. Project-Specific Heritage Sensitivity Zone and Construction Controls

Heritage Sensitivity Zone	Indicative Distance from Designated Cultural Heritage Building	Applicability to RSCM Project	Permitted / Restricted Activities	Required Controls and Mitigation
Core / High-Protection Zone	0 – 15 meters	Areas immediately adjacent to or within close proximity to designated Cultural Heritage Buildings. This zone includes locations where proposed demolition or construction may directly interface with, abut, or potentially affect the physical integrity of heritage buildings.	Uncontrolled demolition, heavy equipment operation, impact piling, uncontrolled excavation, or other activities with potential to cause physical, structural or vibration impacts are not permitted. Essential works required for the project may be undertaken only under controlled conditions.	Detailed pre-construction condition survey and photographic documentation; crack mapping; protection of heritage fabric; controlled/manual or low-impact dismantling where feasible; temporary structural protection where required; exclusion of heavy equipment from sensitive areas; vibration and structural movement monitoring; approved method statement; heritage specialist supervision; dust control; immediate stop-work and corrective action procedure.
Buffer Zone	15 – 50 meters	Areas where construction or demolition activities may	Construction and demolition activities may proceed subject to appropriate	Vibration monitoring during high-risk activities; controlled excavation/piling

Heritage Sensitivity Zone	Indicative Distance from Designated Cultural Heritage Building	Applicability to RSCM Project	Permitted / Restricted Activities	Required Controls and Mitigation
		generate indirect effects such as vibration, ground movement, dust, visual impacts or changes to the setting of heritage buildings.	controls. Activities with elevated vibration or ground-movement risks require specific assessment and control.	methods; dust and debris control; protection of heritage façades and structures; regular visual/condition inspections; construction sequencing and method statements; heritage monitoring where required.
Development Zone	>50 meters	Areas generally farther from designated Cultural Heritage Buildings where direct physical impacts are less likely, subject to site-specific assessment.	Construction may proceed in accordance with the approved ESMP/C-ESMP and CHMP.	General environmental and construction controls; assessment of potential indirect impacts; dust, vibration and ground-movement controls where relevant; Chance Find Procedure; monitoring where site conditions or construction activities warrant it.

Source: RSCM Cultural Heritage Inventory Data and RSCM Masterplan; Consultant site specific analysis and assessment; project-specific mitigation measures developed with reference to applicable Indonesian cultural heritage regulations and AIIB ESF, Permendikbudristek No. 17/2024 concerning the Zoning System of Cultural Heritage.

Note:

The distance ranges presented above are **project-specific heritage sensitivity and protection parameters** developed for the RSCM ESIA based on the spatial relationship between designated Cultural Heritage Buildings and proposed demolition/construction areas, heritage significance, building characteristics, and potential physical, structural, vibration, dust and visual impacts. They do not constitute statutory Cultural Heritage zoning boundaries. Formal Cultural Heritage zoning, where applicable, shall follow the requirements of the competent heritage authority.

Application to the RSCM Development:

Where proposed demolition or construction activities are located within the Core/High-Protection Zone, including locations where existing structures physically abut or are immediately adjacent to designated Cultural Heritage Buildings, the Core Zone requirement shall be interpreted as a restriction on **uncontrolled or high-risk activities**, rather than an absolute prohibition on all works. Essential demolition and construction works may proceed only following approval of appropriate method statements and implementation of enhanced heritage protection, structural and vibration monitoring, specialist supervision, and emergency/stop-work procedures. Where feasible, the design and construction methodology shall prioritize avoidance and physical separation from the heritage fabric.

During the construction phase, all contractors are required to physically demarcate these zones using clear signage and temporary fencing. The project's HSE (Health, Safety, and Environment) officers will conduct daily site inspections to ensure that no heavy equipment breaches the Buffer or Core Zones without prior authorization and adequate mitigation measures.

2.2 Controlled Demolition Procedures

Demolition activities near heritage assets shall utilize controlled dismantling methods to minimize vibration, structural shock, dust generation, and the risk of accidental impact on heritage buildings. The Principal Contractor's HSE Officer and the Independent Heritage Expert Team shall implement continuous monitoring during demolition, piling, excavation, and heavy construction activities near heritage structures. Monitoring parameters include:

- Vibration threshold monitoring using seismographs
- Crack monitoring via installed gauges
- Dust generation and air quality observation
- Accidental impact on heritage buildings
- Periodic structural inspections of historical load-bearing walls

Dust suppression measures must be deployed by the Principal Contractor to prevent the deterioration of historic building materials. Protective coverings shall be installed where necessary to safeguard sensitive historic surfaces.

3 Vibration Monitoring and Structural Control

To minimize the impact of heavy construction activities (such as piling or basement excavation) on the heritage structures within the RSCM complex, the project must implement the following vibration control protocols:

3.1 Real-time Monitoring: Seismograph sensors (vibration meters) must be installed at critical points on the facades and foundations of the heritage buildings to continuously monitor Peak Particle Velocity (PPV).

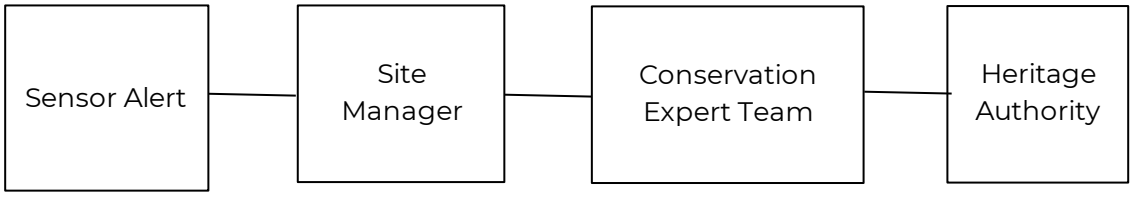
3.2 Vibration Thresholds: The project will adhere to the DIN 4150-3 standard (Category 3 for sensitive heritage structure). The permissible PPV thresholds are as follows:

- 1 - 10 Hz: Max 3 mm/s
- 10 - 50 Hz: 3 - 8 mm/s
- 50 - 100 Hz: 8 - 10 mm/s

3.3 Corrective Action Protocol: In the event that the sensors detect vibration levels exceeding the defined thresholds:

- Automatic Alert: The monitoring system shall be capable of sending instant, real-time notifications to the Site Manager, HSE Officer and the conservation expert team as an early warning.
- Immediate Work Stoppage: The Site Manager and HSE Officer are strictly responsible for immediately halting all heavy machinery activities and vibration work within 20-meter radius of the sensor point must be halted immediately to prevent further vibration wave.
- Structural Inspection: The Independent Heritage Expert team and certified Structural Engineer must immediately conduct visual inspections and crack analysis on the affected areas of the heritage structures to ensure no structural damage has occurred.
- MethodologyModification: The Principal Contractor is required to evaluate and modify the working methodology and obtain approval from the conservation expert before restarting work.

3.4 Incident Reporting Flowchart:



4. Post-Construction Mitigation Measures

Following the completion of construction, post-construction condition assessments shall be conducted to identify any unintended impacts on heritage buildings.

The assessment shall include:

- Structural inspection,
- crack comparison analysis,
- photographic comparison,
- verification of facade conditions,
- Continuous monitoring for a mandatory 3-month post-construction period to track delayed structural settlement.

Any damage resulting from construction activities shall be repaired using conservation-appropriate methods under supervision of the Conservation Architect and qualified specialists. Upon the conclusion of the 3-month monitoring period and the completion of any necessary remediation, a final Heritage Closing Report shall be compiled and submitted to the Project Management Unit (PMU) and the Cultural Heritage Expert Team (TACB) for formal project closeout.

5.10.4 Chance Find Procedures

If archaeological remains, historical foundations, or historical objects are discovered during excavation activities:

a. Construction works shall immediately stop within the affected area.
b. The area shall be secured and delineated.
c. Initial documentation shall be conducted within 24 hours.
d. Relevant cultural heritage authorities shall be notified.
e. A designated Archaeologist shall be deployed immediately to conduct assessments, document the artifacts in situ, and determine appropriate mitigation measures.
f. Construction may resume only after official clearance has been issued.

5.10.5 Mitigation Responsibility Matrix

To ensure strict compliance with the AIIB Environmental and Social Framework (ESF) and local heritage regulations, accountability for every mitigation action must be formalized. The following matrix defines the roles and responsibilities for implementing, monitoring, supervising, and reporting cultural heritage mitigation measures throughout the project lifecycle. For the RSCM project, the PIU RSCM is responsible for direct project-level implementation, monitoring, supervision, and evaluation of ESMP and CHMP implementation by the Principal Contractor/Construction Management Consultant (CMC) and other relevant parties. The Principal Contractor/CMC is responsible for implementing applicable mitigation measures at the construction site and reporting to the PIU RSCM. The PIU RSCM reports the progress and performance of ESMP and CHMP implementation to the PMU of the Ministry of Health.

Table 38. Cultural Heritage Mitigation Responsibility Matrix

Project Phase	Key Mitigation Action	Executing Responsibility	Supervising
General / All Phases	Ensure compliance with AIIB ESS1 and local heritage laws; fund mitigation measures and CHMP mitigation measures	Project Implementation Unit (PIU) RSCM	AIIB/ *Dinas Kebudayaan Provinsi DKI Jakarta* (DKI Jakarta Provincial Cultural Service), PMU MoH
Pre-Construction	Conduct baseline structural and condition surveys, photographic documentation, and	Conservation Architect & Historian/ Cultural Heritage Structural Engineer	PIU RSCM & Cultural Heritage Expert Team

Project Phase	Key Mitigation Action	Executing Responsibility	Supervising
	crack mapping of designated heritage building before commencement of physical works.		
Pre-Construction	Provide mandatory heritage awareness training and induction for all workers	Principal Contractor/HSE Officer	PIU RSCM, Conservation Architect, CH structural engineer & Archaeologist
Pre-Construction	Prepare and Submit the Contractor's Environmental and Social Management Plan (C-ESMP) including the Cultural Heritage Management Plan, heritage protection measures, demolition and construction method statements, vibration monitoring plan, emergency response, and reporting procedures.	Principal Contractor, Contractor HSE Officer &	PIU RSCM, Conservation Architect, Archaeologist, Cultural Heritage Expert Team (TACB) & Dinas Kebudayaan Provinsi DKI Jakarta (DKI Jakarta Provincial Cultural Service
Construction (Demolition)	Execute structural decoupling and controlled dismantling using appropriate low-vibration method and low-vibration tools to protect adjacent heritage buildings.	Principal Contractor/ CMC	PIU RSCM & Conservation Architect/ Structural Engineer
Construction (Monitoring)	Install seismographs and conduct continuous real-time monitoring of Peak Particle Velocity (PPV) adhering to DIN 4150-3 during demolition, excavation, piling, and other activities with potential to affect heritage buildings, in accordance with the monitoring plan	Principal Contractor & HSE Officer	PIU RSCM, CMC & Conservation Architect
Construction (Corrective Action)	Implement immediate corrective measures where monitoring indicates that established thresholds or heritage protection	Principal Contractor, Site Manager & HSE Officer	PIU RSCM, CMC & Conservation Architect

Project Phase	Key Mitigation Action	Executing Responsibility	Supervising
	requirements are exceeded.		
Construction (Dust and Physical Protection)	Implement dust control, protective barriers and site controls to prevent deposition of construction dust and accidental physical damage to heritage buildings.	Principal Contractor, Site Manager & HSE Officer	PIU RSCM, CMC & Conservation Architect
Construction (Chance Finds)	Implement Chance Find Procedures: halt work, secure site, and conduct initial documentation within 24 hours.	Principal Contractor/ HSE Officer	PIU RSCM & Archaeologist/ TACB
Construction (Emergency Response)	Immediately report any damage, cracking, structural movement or other incident affecting a heritage building and implement the emergency response and corrective action procedure	Principal Contractor & Site Manager	PIU RSCM, CMC & Heritage Expert
Post-Construction	Conduct post-construction structural inspections and crack comparison analysis, and submit periodic ESMP/CHMP implementation reports and monitoring results to the PIU	Principal Contractor/CMC & Conservation Architect/ Structural Engineer	PIU RSCM & TACB
Post-Construction	Execute any necessary repairs using conservation-appropriate methods	Principal Contractor	Conservation Architect
Project Oversight	Consolidate and report ESMp/CHMP implementation progress and performance to the PMU MoH	PIU RSCM	PMU MoH

5.11 Gap Assessment Matrix: Social and Labor Conditions Compared to AIIB ESS1 & ESS2

Based on the baseline assessment of RSCM's current operational practices and a detailed review of AIIB's Environmental and Social Framework (ESF), several key social and labor gaps were identified. Table 40 presents the gap analysis comparing current hospital practices against the requirements of AIIB ESS1 (Environmental and Social Assessment and Management) and ESS2 (Labor and Working Conditions), along with the specific mitigation instruments required to address these gaps during project implementation.

Table 39. Social and Labor Gap Assessment Matrix between Current RSCM Practices and AIIB ESS1 & ESS2 Requirements

No	Social and Labor Aspect	Current Situation / Existing Practice at RSCM	Applicable AIIB ESS Requirements	Gap Assessment	Required Actions / Instruments
1	Continuity of Public Health Services	Construction of Superblock 1 will affect several existing outpatient and inpatient service units. Temporary relocation is planned internally by the hospital.	ESS1: Identify and manage social risks and impacts, including maintaining access to essential public services and minimizing disruption to affected communities and service users.	No formal and integrated plan has been identified to systematically manage service relocation, patient-flow changes, access arrangements, and continuity of healthcare capacity during construction.	Develop and implement a Service Continuity and Relocation Plan, including service relocation, patient-flow management, access arrangements, communication, and capacity maintenance.
2	Commercial Tenants and Vendors / Economic Displacement	Canteens, convenience stores, SMEs, and other commercial tenants operate within or around the project footprint, generally under short-term rental or lease arrangements.	ESS1: Avoid or minimize economic displacement and address adverse economic impacts on affected persons through appropriate mitigation and livelihood restoration measures.	Existing arrangements do not clearly provide formal provisions for advance notification, alternative space, transition arrangements, or measures to address temporary income losses resulting from project-related relocation.	Conduct a Commercial Tenant/Vendor Assessment and develop a Relocation and Livelihood Restoration Plan, including notification, alternative space, transition period, and appropriate measures for temporary economic losses.
3	Cultural Heritage and Social Value	The project area is adjacent to historic/heritage assets, including the former CBZ/Eijkman Building. Construction activities may generate vibration, dust, visual impacts, and restricted access.	ESS1: Assess and manage risks to cultural heritage and community access. Where relevant, establish procedures for physical cultural resources and chance finds.	No project-specific technical procedures have been identified for managing construction-related vibration, physical impacts, visual impacts, and access around heritage assets.	Prepare a Cultural Heritage Management Plan (CHMP), including monitoring of vibration and physical impacts, protection measures, visitor/access management, and a Chance Find Procedure.
4	Access for Vulnerable Groups	Construction activities may require pedestrian diversions, temporary gate closures, and changes to circulation within the hospital area.	ESS1: Identify and address differentiated risks and ensure inclusive and safe access, particularly for vulnerable and disadvantaged groups.	No comprehensive temporary accessibility plan has been identified for elderly patients, pregnant women, persons with disabilities (PWDs), and other mobility-	Develop a Vulnerable Group Access and Inclusivity Plan, including barrier-free routes, accessible entrances, safe pedestrian circulation, signage/wayfinding, and emergency/evacuation arrangements.

No	Social and Labor Aspect	Current Situation / Existing Practice at RSCM	Applicable AIIB ESS Requirements	Gap Assessment	Required Actions / Instruments
				constrained users during construction.	
5	Labor and Working Conditions	RSCM has established OHS/SMK3 arrangements for its personnel. However, construction workers employed by contractors and subcontractors are subject to contractor-specific arrangements.	ESS2: Establish fair working conditions, terms of employment, non-discrimination, prohibition of child and forced labor, and appropriate management of contracted workers.	Labor and working-condition requirements are not yet demonstrated as being consistently and contractually aligned with AIIB ESS2 across all primary contractors and subcontractors.	Establish Labor Management Procedures (LMP) and incorporate ESS2-compliant labor requirements into contractor and subcontractor agreements, procurement documents, and supervision arrangements.
6	Occupational Health and Safety (OHS)	RSCM operates an established hospital OHS/SMK3 system. Construction activities introduce additional risks associated with civil works, interaction with hospital operations, and contractor activities.	ESS2: Provide safe and healthy working conditions and implement appropriate measures to prevent occupational injuries, illnesses, and incidents.	A project-specific OHS framework integrating hospital safety requirements with construction contractor OHS systems has not been fully established.	Develop a Construction OHS Management Plan, aligned with the LMP and RSCM's SMK3 system, including hazard identification, risk assessment, emergency response, worker induction, PPE, incident reporting, and monitoring.
7	Worker Grievance Mechanism	RSCM has internal grievance channels for its permanent/staff workforce. Coverage of third-party construction workers is not clearly established.	ESS2: Provide a readily accessible, transparent, and effective grievance mechanism for project workers, without retaliation.	Construction workers may not have a dedicated and confidential mechanism to raise concerns related to wages, working conditions, OHS, harassment, or other labor issues.	Establish a Worker Grievance Redress Mechanism (Worker GRM) applicable to contractors and subcontractors, with confidential reporting, defined response procedures, documentation, escalation, and protection against retaliation.
8	GBV, SEAH, and Workplace Harassment	No project-specific Code of Conduct and dedicated GBV/SEAH management procedures have been identified for construction workers.	ESS1 & ESS2: Assess and manage risks related to gender-based violence, sexual exploitation and abuse, sexual harassment, and other forms of workplace/community harassment.	Absence of mandatory contractor Code of Conduct, worker awareness/training, confidential reporting channels, and clear referral procedures for GBV/SEAH-related incidents.	Develop and implement a GBV/SEAH Action Plan and Contractor Code of Conduct, including mandatory worker commitments, induction/training, confidential reporting, referral pathways, survivor-centered response, and monitoring.

6. Identification and Assessment of Environmental and Social Risks and Impacts

6.1 Project's Area of Influence

The determination of the project's Area of Influence (AoI) for the modernization, integration, and vertical expansion project at RSCM aims to map the spatial, ecological, social, and administrative boundaries where the environmental and social impacts of the project are likely to occur. This area of influence is divided into several zones based on the proximity and intensity of the impacts, as systematically illustrated in Figure 22. (Project's Area of Influence Map).

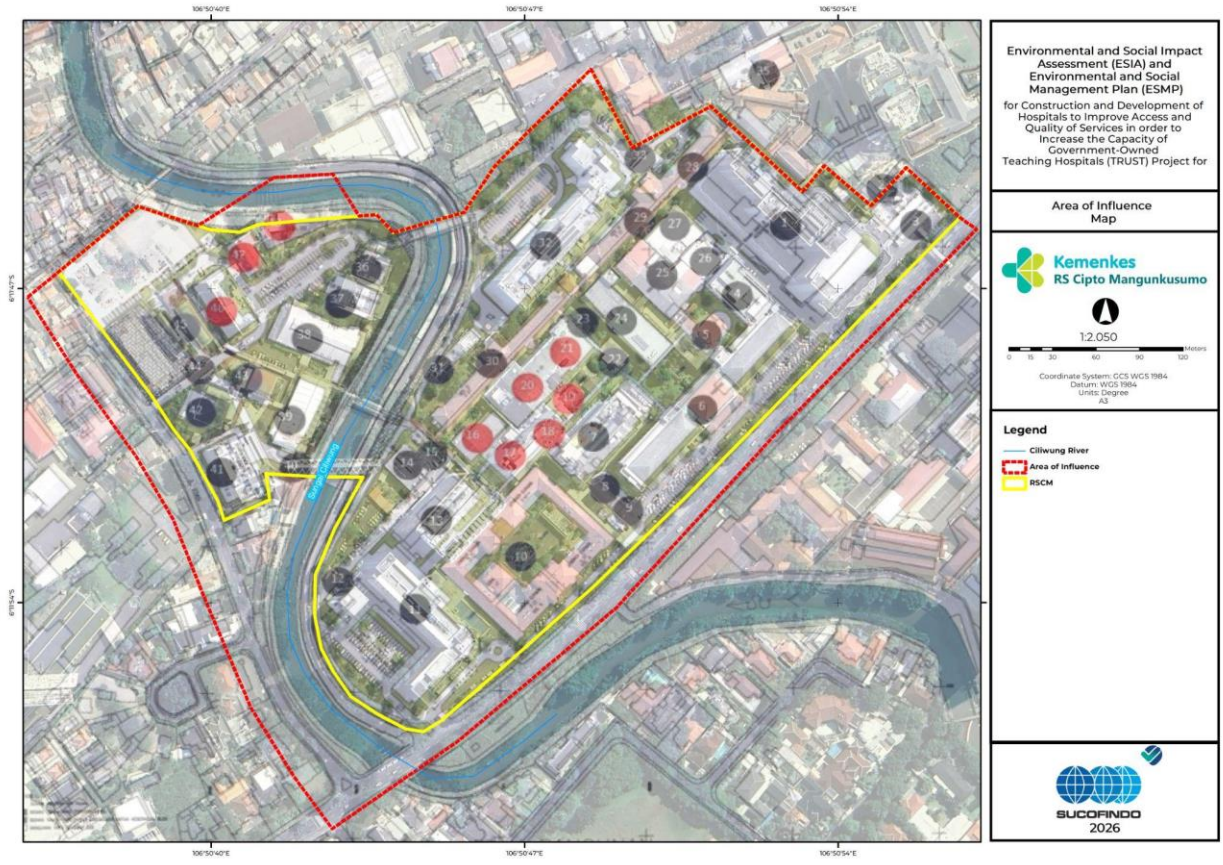


Figure 29. Project's Area of Influence Map

6.1.1 Environmental Boundaries and Direct Impact Zone

The direct impact zone encompasses the entire area within the legally owned land boundaries of RSCM, covering a total area of 136.889 square meters (or 13.69 hectares). This area serves as the core location for all pre-construction and construction activities, including the demolition of older structures, deep foundation bored piling, and the erection of the new vertical medical towers.

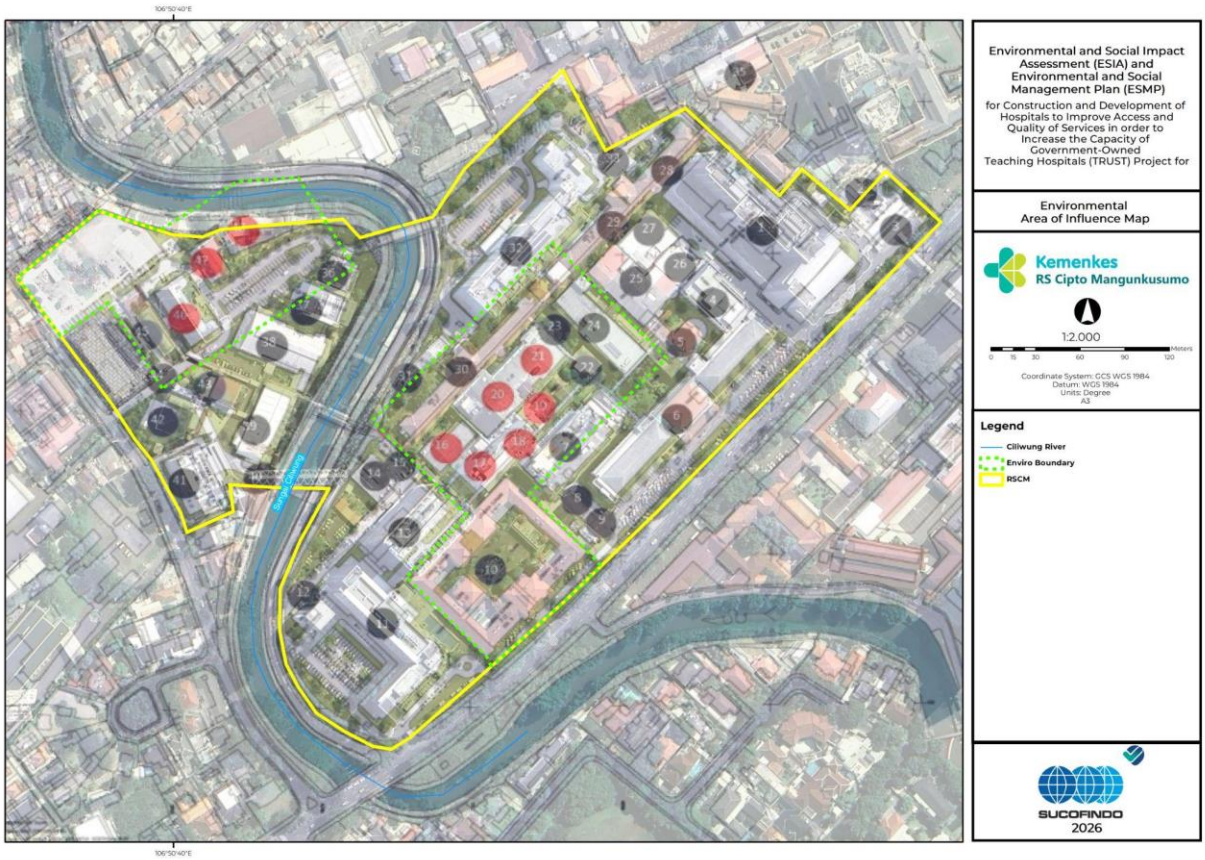


Figure 30. Environmental Area of Influence

The direct physical impacts within this zone include elevated ambient noise, localized construction dust emissions, structural vibrations, increasing internal traffic flows and parking, and potential disruptions to patient comfort in adjacent active inpatient wards, as well as the operational stability of highly sensitive medical equipment (such as MRI and CT scanners) in connected buildings. All internal environmental infrastructure management, including the operation of the new Wastewater Treatment Plant (IPAL) and the expansion of the Temporary Hazardous Waste Storage (TPS B3), is fully contained within these physical boundaries.

6.1.2 Social Boundaries and Indirect Impact Zone

The indirect impact zone covers areas outside the hospital's physical boundaries that may be indirectly affected by construction or daily operational activities.

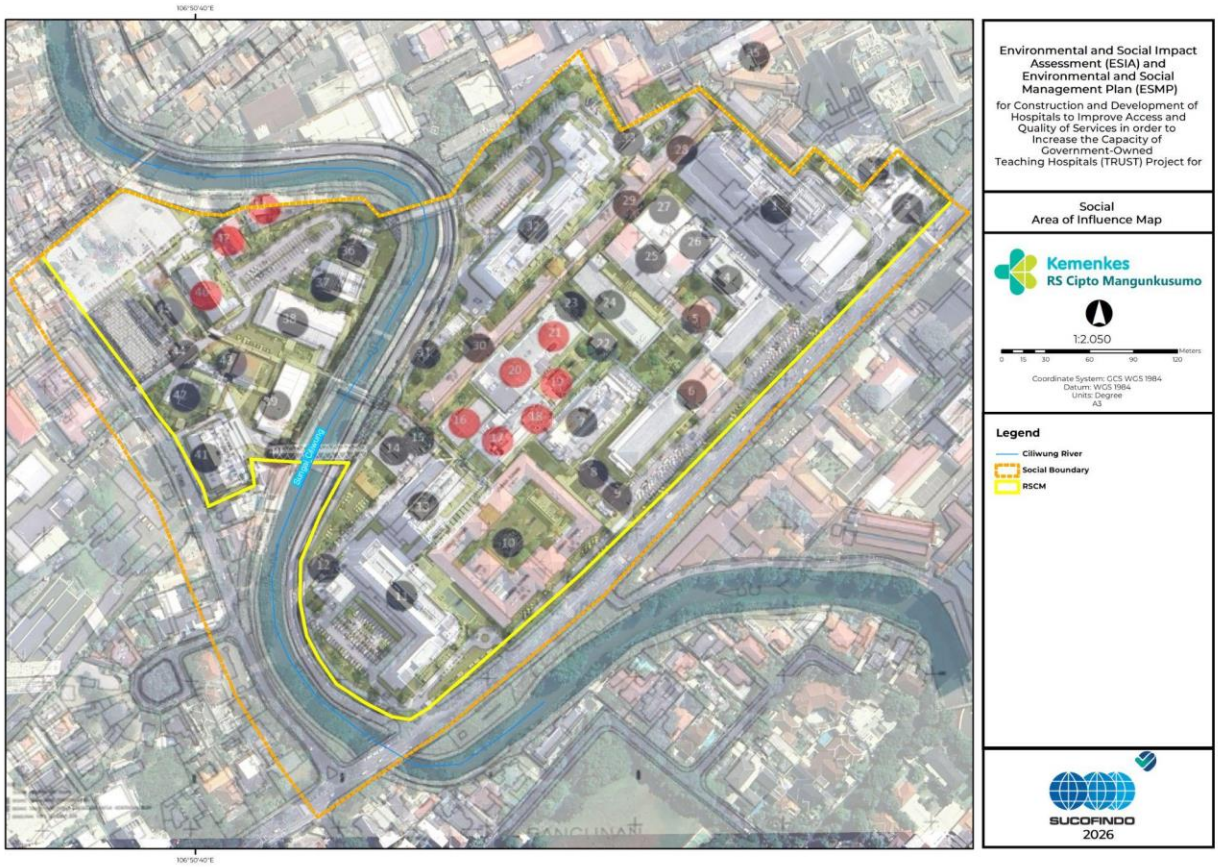


Figure 31. Social Area of Influence

The social boundaries within this zone are determined based on the distribution of residential settlements, public transportation corridors, and the intensity of community activities around the project, which include the following:

a. Nearest Residential Communities and informal vendors: Highly dense residential settlements located in Kenari Sub-district, Senen District, specifically the neighborhoods of Senen District, situated within a radius of approximately 100 meters from the project's outer boundary as well as informal vendors along Diponegoro and Kimia street. These community and vendors are primary focus within the social boundaries due to potential exposure to indirect impacts such as localized dust emissions, traffic or secondary noise during the construction phase.

b. Patients area: In-Stay patients buildings include A, Kiara, Kanigara, Kirana and Kencana Buildings.
c. Primary Transportation Corridors: The arterial road network surrounding the hospital complex, particularly Jalan Pangeran Diponegoro to the south and Jalan Salemba Raya to the east. The traffic area of influence includes potential disruptions to traffic flow and the risk of congestion due to the mobilization of heavy vehicles or project logistics entering and exiting the site.

d. Neighboring Institutional Boundaries: The academic compound of the Faculty of Medicine, Universitas Indonesia (FKUI) and other supporting medical facilities located around the Salemba-Diponegoro corridor. This boundary exerts a strong social influence given the high daily mobility of students, clinical residents (PPDS), and academic staff between the two zones.

6.1.3 Long-Term Influence Area (Regional and National Scales)

Given RSCM's status as the premier national referral hospital and the pinnacle apex of healthcare services in Indonesia, the project's socio-economic and public health area of influence extends massively beyond the administrative boundaries of Central Jakarta. During the long-term operational phase, the project's area of influence encompasses both regional (Jabodetabek) and national scales. The newly constructed medical infrastructure will directly expand service capacity and reduce patient waiting times for millions of referral patients from various provinces across Indonesia under the National Health Insurance (JKN/BPJS Kesehatan) system.

6.2 Identification and Assessment of Environment and Social Risks and Impacts

The method used in identifying this potential impact is a simple interaction matrix that is useful in looking at the causal relationship between the activity component and the environmental and social aspects. As input to determine the potential impact, discussions have been held with the initiators to get a description of the activity, in addition to conducting literature studies and field observations to get an overview of the environmental components at the activity site. What is not missed is to include information obtained from the community through the socialization of activity plans.

In assessing the significance of each identified impact, the following factors were considered:

- Impact Likelihood: The probability that a specific impact will occur as a result of the project activity. For simplicity and clarity, only two categories are used: likely (the impact is expected to occur under typical operating conditions) and unlikely (the impact is not expected to occur or would only occur under exceptional circumstances).
- Impact Scope: The nature of the impact in terms of whether it is direct (occurs as an immediate result of project activities) or indirect (arises as a consequence of project activities but occurs later in time or in a different location).
- Spatial Scale: The geographic extent of the impact, categorized as local (site-specific)—confined to the project site—or off-site—affecting surrounding areas or broader regions beyond the project boundary.
- Impact Magnitude: The intensity or severity of the potential impact, categorized as:
    - Minor: Small-scale, short-term, and reversible impacts with limited significance.

- Medium: Moderate impacts that may be long-term or partially reversible, affecting multiple receptors or components.
- High: Severe, large-scale, or irreversible impacts with significant implications for environmental or social receptors.

- Receptor Sensitivity: The degree to which an environmental or social receptor (e.g., ecosystem, population group, or infrastructure) is vulnerable to or able to cope with the identified impact. Sensitive receptors may experience more pronounced consequences even from moderate impacts.

No ongoing or planned construction activities financed under other schemes or projects will occur concurrently with the Project within the Project area. Consequently, there are no overlapping construction activities that could give rise to combined or cumulative environmental and social impacts. The Project's environmental and social impacts have therefore been assessed on a standalone basis, and no significant combined impacts are anticipated.

Table 40. Summary of Environmental and Social Risks, Impacts, and Mitigation Considerations

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
I	**Pre-Construction**							
A	**Environmental**							
1	Failure to Incorporate Climate Change Risk into Project	Engineering Design of the New Hospital	Various risks identified in Climate Risks Analysis are not fully addressed and/or incorporated into engineering design which leave these risks vulnerable to impact in the future when identified risk are actualized	Unlikely	Direct	Local	Minor to Medium	Hospital Staff, Patient and Visitor
2	Failure to incorporate environmental and social considerations in the design	Engineering design of the new hospital (functionality and operations)	Negligent in incorporating environmental and social considerations into the design, such as the management of increased healthcare waste (both hazardous and non-hazardous), and the selection of equipment to reduce emissions, dust, noise, and vibration	Unlikely	Direct	Local	Minor to Medium	Hospital Staff, Patient and Visitor
B	**Social**							
1	Exclusion of vulnerable Groups, hospital staff and patients, from consultation meetings	Consultation conducted with project stakeholders, including: a. hospital staff, particularly female staff, b. patients (particularly patients with disabilities and elderly patients)	During stakeholder consultation (during project design) with potentially affected people	Likely	Direct	Local	Minor	a. Vulnerable people and Group b. Hospital staff (especially female and elder staff)
2	Compensation and Support for tenant of demolished buildings	Three tenants identified in the building that will be demolished	Economic displacement, business and livelihood disruption resulting from demolition, relocation, or loss of access to commercial premises.	Very Likely	Direct	Local	Minor	Hospital Staff, Patient, Visitor, and Tenants, workers of the businesses

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
3	Design unknowingly introducing risks to safety or environment	Architectural design	Affect the ability to maximize patient safety	Likely	Direct	Local	Minor	Hospital Staff, Patients and Visitors
4	Unverified Damage Claims & Heritage Violations	Pre-construction site preparation and planning	Failure to undertake baseline condition surveys and photographic documentation prior to construction may result in unverified claims regarding damage to protected heritage buildings	Likely	Direct	Local	Moderate	RSCM Heritage Buildings, Cultural Heritage Authorities
II	**During Demolition & Construction**							
A	**Environmental**							
1	Asbestos Containing Material (ACM)	Demolition of old building containing ACM	Temporary	Likely	Direct	Local	Minor	Workers directly engaged in demolishing materials with ACM, Hospital Staff, Patient, and visitors
2	Noise will be generated during the construction stage	a. Demolition of old structure/ buildings to make space for construction of new buildings b. Earth excavation, particularly in preparation of the foundation of the new builds c. Clearing and grubbings (debris and vegetative covers from existing healthcare facilities) d. Operations and routine maintenance of machinery (e.g. excavator, bulldozers), and equipment (vibrators, hampers, vehicles) e. Workers' camp	a. Temporary, localized during daytime b. Potentially during nighttime, particularly during peak construction stage	Very Likely	Direct	Local	Minor to Medium	a. Workers b. Hospital staff c. Visitors d. Local inhabitants e. Vendors who come to provide logistics services

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
3	Air pollution from dust will be generated	a. Earth excavation, particularly in preparation of the foundation of the new builds b. Vehicle movement c. Loading and unloading of materials (new construction materials, construction machinery & equipment) d. Operation of machinery e. Emissions form a project (project vehicles, petrol and diesel operation engines)	Temporary, localized during daytime at specific sites where physical construction activities are carried out	Very Likely	Direct	Local	Minor to Medium	a. Workers b. Hospital staff c. Visitors d. Local inhabitants e. Vendor who come to provide logistics services
4	Vibrations will be generated from the foundation work	a. Earth excavation, particularly in preparation of the foundation of the new builds b. Vehicle movement c. Loading and unloading of materials (new construction materials, construction machinery & equipments) d. Operation of machinery	Temporary	Very Likely	Direct	Local	Minor	a. Workers b. Hospital staff c. Visitors d. Local inhabitants e. Vendor who come to provide logistics services
5	Contamination of Soil and Sub–soils	Leakage of oil, chemicals used for machinery	Temporary	Likely	Direct	Local	Minor	Local Soil Area
6	Contamination of Surface water	a. Leakage of oil, chemicals used for machinery, b. earthworks, and increased surface runoff carrying sediment materials into nearby water bodies such as rivers, or drainage channels.	Temporary	Likely	Direct	Local	Minor to Medium	Surface water close to the RSCM

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
7	Wastes	Waste of various types will be generated including: a. Solid wastes (e.g. construction debris, unused construction materials), b. Hazardous and non-hazardous wastes, c) Domestic wastes from a) construction activities at construction site, d) Living activities at workers' camp	Temporary	Unlikely	Direct	Local	Minor to Medium	a. Workers working on the construction sites and beyond b. Any person who are exposed to natural disaster impact at the construction sites and the surrounding areas
8	Natural Disaster	This is contextual risk that is predictable, and sometime unpredictable	Extreme weather conditions (heavy rain, flood) could affect the construction temporarily during construction **Temporary**	Unlikely	Direct	Local	Modedrate	Workers working on the construction sites and beyond
9	Disruption of Essential Healthcare Services: Risk of interrupted clinical, diagnostic, and emergency healthcare delivery during temporary service transfer.	Demolition of existing hospital buildings and relocation of active medical departments (e.g., outpatient clinics, inpatient wards) prior to construction.	Nature: Negative, Direct Duration: Temporary (Pre-construction phase during physical transfer, ~1–3 months)	Likely	Direct	Local	Moderate	Patients, particularly emergency and critical care cases
B	**Social**							
1	Disease transmission	Presence and increased interaction between contractor's workers and local population	Communicable diseases (air-borne, water-borne) may be spread due to concentration of the labor influx and their interaction with local inhabitants during the construction stage. Labor influx may include workers that are engaged by construction contractors from other localities	Unlikely	Direct	Local	Minor to Medium	a. Workers b. Hospital staff c. Visitors d. Local inhabitants e. Vendors who come to provide logistics services (including local

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
								and non-local people)
2	Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH SEA/SH)	The SEA/SH risk is anticipated due to concentration of contractor's workers, and their close interaction with local communities. Additionally, the influx of non-local workers residing in the project area presents potential risks of communicable disease transmission and hightened social friction within the community during construction stage	Affect to individual(s)	Unlikely	Direct	Local	Minor to Medium	a. Workers b. Hospital staff c. Visitors d. Local inhabitants e. Vendors who come to provide logistics services

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
3	Occupational Health and Safety	a. Fire and Explosion. Fires and or explosions resulting from ignition of flammable materials or gases can lead to loss of property as well as injury or fatalities to project workers. b. Corrosive, oxidizing, and reactive chemicals. Corrosive, oxidizing, and reactive chemicals present similar hazards and require similar control measures as flammable materials	**Physical Hazards**. Physical hazards represent potential for accident or injury or illness due to repetitive exposure to mechanical action or physical activities that may result in a wide range of injuries, from minor that needs medical aid only, to disabling, catastrophic, and/or fatal. a. Accidents due to falls: falling from ladders, scaffoldings, high floors, and vehicles, etc. b. Accident due to falling objects: Tools, machinery, equipment, and materials used during construction may fall from the height, causing injuries or death. c. Fall into open holes: holes, manhole, and areas of deep excavation may be commonly found at works. Fall into these holes may cause injuries of various degrees. d. Physical injuries related to the operations of heavy equipment: Injury or death may result during operations of heavy equipment, such as crane, excavator, cuts, and bruises on sharp objects etc. **Chemical Hazards**. Chemical hazards represent potential for illnesses or injuries, both short and long term, and fatalities due to single acute exposure or chronic repetitive exposure to toxic, corrosive, sensitizing or oxidative substances. Common chemicals used in construction include Portland cement clinker (mineral binders), formaldehyde (wood-based materials), polyurethane, vinyl, cadmium, or lead (paints and resins), and solvents **Fire and Explosions**. Fires and or explosions resulting from ignition of flammable materials or gases can lead to	Likely	Direct and Indirect	Local	Minor to Medium	a. Workers (Direct Impact) b. Hospital staff c. Visitors d. Local inhabitants e. Vendors who come to provide logistics services f. Street vendors/businesses located next ti the fence of the RSCM f. Anyone

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
			loss of property as well as injury or fatalities to project workers					
4	Safety hospital staff, patient and visitors (the publlic)	a. Demolition of old structures/ buildings while hospital services remain in operations b. Construction of new structures/buildings while hospital services remain in operation	a. Risk of structural failures and falling objects during demolition causing injury to nearby hospital staff, patients, and visitors b. Hospitals access and regress pathways are affected which may cause fall, slips and trip accidents	Likely	Direct	Local	Moderate	a. Workers (Direct Impact) b. Hospital staff c. Visitors d. Local inhabitants e. Vendor who come to provide logistics services f. Anyone

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
5	Road & Traffic Safety	Mobilization of heavy construction vehicles, material haulage, site excavation, and movement of equipment between supply points, paired with internal space reconfiguration for contractor holding zones and equipment staging.	External & Internal Impacts: • Internal Premises: Disruption of internal hospital traffic circulation, reduction/loss of visitor and staff parking spaces, congestion at internal drop-off zones, and heightened risk of vehicular-pedestrian accidents involving mobility-impaired patients, visitors, and ambulances within hospital grounds. • External Corridor: Increased traffic flow congestion along Salemba-Diponegoro roads, noise/vibration, and dust emissions along haul routes. **Short to medium-term impact during construction phase.**	Likely	Direct	Local	Minor	a. Contractor Workers (Direct Impact) b. Driver c. Pedestrians d. Local inhabitants e. visitors f. Street vendors g. Motorcyclists h. Cyclists i. Animals
6	Child labor	Hiring of child labor for temporary, unskilled work by contractors	a. Violation of national labor laws and international labor standards b. Harm to physical and mental health of children involved c. Legal and reputational risks to the hospital project d. Social backlash from the community	Likely	Direct	Local	Minor	Labor under 18 years of age
7	Underpaid pay and unequal treatment	Recruitment of workers on the part of construction contractors (both main contractors and subcontractors)	Local people recruited as unskilled workers (by contractors) may not be offered a written working contract. As such, there is a possibility that they may be underpaid compared to the nature, scope, and quantity of work that they are expected to perform. They may also be asked to work under conditions that are hazardous to them, such as working without Personal Protective Equipment (as may be required for such work). Underpayment may also take place on the basis of gender, temporary work status – at the discretion of contractors. The risks of late wage payment or failing to pay	Likely	Direct	Local	Minor	Labors

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
			workers should be assessed and included as part of the contract.					
8	Cultural Heritage Structural Damage	Demolition of nearby or attached non-heritage structures and corridors	Risk of tearing or compromising historic masonry, potential cracking, structural distress, or damage to heritage building elements resulting from demolition and nearby construction activities. Impacts may be temporary or permanent depending on severity.	Likely	Direct	Local	Medium	Cultural Heritage Buildings, Structures, and Historic Architectural Elements and Relics
9	Cultural Heritage Vibration Impacts	Deep basement excavation, impact piling, underground works, and heavy machinery operations	Construction-generated vibration may result in micro-cracking, foundation settlement, structural instability, or destabilization of heritage buildings located near the construction zones.	Likely	Direct	Local	Medium	Cultural Heritage Buildings, Structures, and Historic Architectural Elements and Relics

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
10	Disturbance to Potential Archaeological Resources / Chance Finds	Excavation, earthworks, trenching, basement construction, utility installation	Previously undocumented historical foundations, buried structures, or archaeological materials associated with the cultural heritage buildings may be damaged, displaced, or destroyed during excavation activities. The impact may be permanent if not properly managed.	Likely	Direct	Local	Medium	Archaeological remains and historic foundations
11	Job Opportunities	Potential increased income for current street vendors and new street vendors who may migrate to area near construction sites to provide food and drink service to construction workers	Temporary	Likely	Direct	Local	Medium	Street Vendors
12	Delayed Access to Care	a. Relocation of certain existing staff to PMU staffing b. Temporary, short–term closure or relocation of certain hospital areas c. Temporary shutdowns of utilities	a. Potentially leading to delays in providing essential medical care b. Rerouting patient traffic c. Temporary utility shutdown may impact medical equipment, lighting, and climate control systems d. Construction activities and presence of labor force (from contractors) may pose challenges to patient transportation, potentially causing delays in accessing necessary care. e. Affect emergency evacuation routes or procedures	Likely	Direct	Local	Minor to Medium	a. Patients b. Medical staff involved in healthcare and emergency services
III	**During Migration of Hospital Functions**							
A	**Environmental**							
1	Safety	Construction activities of contractors still not fully completed and	Construction activities of contractors still not fully completed and decommission is not yet finished	Likely	Direct	Local	Minor to Medium	a. Patients b. Medical staff involved in healthcare and

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
		decommission is not yet finished						emergency services
B	**Social**							
1	Safety to patients and medical staff (e.g. nurses, doctors) due to medical errors, communication breakdowns, and physical hazards during transfer/transport and transition for full functioning of medical services	Transferring of patients and hospital staff to new constructed building	These risks may be exacerbated by factors like patient instability, complication during transport, complex medical conditions, and logistical challenges	Likely	Direct	Local	Minor	Patients and medical staff involved in patient transferring
2	Road and Traffic safety	Increased traffic flow between construction sites and other destination such as borrow pit, quarry, material supply warehouses, disposal sites	Higher volume of construction vehicles may cause traffic congestion and delays Increased risk of accidents involving workers, pedestrians, and road users Noise, dust, and emissions from construction traffic **Short to medium-term impact during construction phase**	Likely	Direct	Local	Minor	a. Contractor Workers (Direct Impact) b. Driver c. Pedestrians d. Local inhabitants e. Motorcyclists f. Cyclists g. Animals
3	Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH SEA/SH)	Increased interaction (migration stage) between new buildings and old infrastructures– when there is increased interaction among patients, hospital staff, visitors, and hospital's contractors and service providers	The SEA/SH risk is anticipated during migration stage of new buildings when there is an interaction among patients, hospital staff, visitors, and hospital's contractors and service providers	Unlikely	Direct	Local	Minor	a. Hospital staff b. Patient c. Visitors d. Vendors who come to provide logistics services e. Contactors
IV	**During Operation**							
A	**Environmental**							

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
1	Healthcare Waste Treatment	Healthcare waste (including hazardous and non–hazardous waste) will be treated in accordance with the national laws and regulations	Potential release of contaminants into the environment due to improper treatment chemical or microbiological residues in wastewater **Long-term accumulation of waste if treatment is inadequate**	Likely	Indirect	Local	Minor to Medium	a. Hospital staff b. Staff transporting toxic and hazardous waste c. Soil and local environment around the TPS d. Water body that receives the treated wastewater discharged from wastewater treatment plant (Ciliwung River)
2	Wastewater Treatment	Wastewater treatment will be treated in accordance with the national laws and regulations	Wastewater will be generated during the operation of the new hospital	Likely	Indirect	Local	Minor to Medium	a. Hospital staff b. Patient c. Visitors
3	E–waste	IT equipment (e.g. computers, peripherals, cables, batteries, etc.), medial equipment and appliances, electrical equipment will be purchased and used to improve the health and patient management functions and diagnosis.	Used computers, medical equipment, appliances, electrical equipment (mal–function, or unusable due to end of life) will be generated	Likely	Direct	Local	Minor	Area where these unused equipment and utilities are disposed of

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
4	Disease transmission	Inadequate management of healthcare waste due to increased amount of healthcare waste	The superblock 1 building will increase the total number of beds by 103 which spread on 4 different facilities (Emergency, cardio cerebrovascular, radiation oncology, and nuclear medicine). Operations of the new hospital which have increased number of beds, will increase a considerable amount of healthcare waste. a. The hazardous healthcare waste may be infectious, toxic, carcinogen, flammable, corrosive, reactive, explosive or radioactive. b. Infectious waste: waste known or suspected to contain pathogens and pose a risk of disease transmission, e.g. waste and wastewater contaminated with blood and other body fluids, including highly infectious waste such as laboratory cultures and microbiological stocks and waste including other materials that have been in contact with patients infected with highly infectious diseases in isolation wards; c. Pathological waste: human tissues, organs or fluids, body parts, foetuses, unused blood products and contaminated animal carcasses; d. Sharps waste: used or unused sharps, e.g. hypodermic, intravenous or other needles; auto-disable syringes; syringes with attached needles; infusion sets; scalpels; pipettes; knives; blades; broken glass; d. Chemical waste: for example, solvents and reagents used for laboratory preparations, disinfectants, sterilants and heavy metals contained in medical devices (e.g. mercury in broken thermometers) and batteries;	Likely	Direct	Local	Minor to Medium	a. Hospital staff b. Patient c. Visitors d. Vendors who come to provide logistics services

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
			e. Pharmaceutical and cytotoxic waste: pharmaceuticals that are expired or no longer needed; items contaminated by, or containing, pharmaceuticals. Cytotoxic waste containing substances with genotoxic properties, e.g. waste containing cytostatic drugs (often used in cancer therapy); genotoxic chemicals; f. Radioactive waste: such as products contaminated by radionuclides including radioactive diagnostic material or radiotherapeutic materials; and g. non-hazardous or general waste: waste that does not pose any particular biological, chemical, radioactive or physical hazard					

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
		Inadequate management of healthcare waste due to management capacity	a. Lack of awareness on health hazards related to health-care waste b. Lack of adequate training in proper waste management, absence of waste management and disposal systems c. Insufficient financial and human resources in current healthcare waste management practices	Likely	Direct	Local	Minor to Medium	a. Hospital staff (medical and technical staff) b. Visitors c. Contractors (engaged ad-hoc) d. Service providers (engaged ad-hoc)
5	Nosocomial Infections	Appearance of Nosocomial Infections	Cross-infection that occurs in nurses or patients during hospital treatment within ±72 hours after being in the hospital is very likely to occur	Likely	Direct	Local	Minor	a. Patients b. Hospital staff
6	Occupational health and safety	During the operation of the new hospital, accidents may happy during the day–to–day healthcare activities perform by hospital staff	**Physical Hazards** Physical hazards represent potential for accident or injury or illness due: a. Accidents due to falls: falling from ladders, high floors, and vehicles, etc. b. Accident due to falling objects: Tools, machinery, equipment, and materials used may fall from the height, causing injuries or death to workers of contractors engaged ad-hoc, and people in the surrounding area. c. Physical injuries related to the operations of heavy equipment: Injury or death may result during operations of heavy equipment as part of routine maintenance **Chemical Hazards** Chemical hazards represent potential for illnesses or injuries, both short and long term, and fatalities due to single acute exposure or chronic repetitive exposure to toxic, corrosive, sensitizing or oxidative substances, especially for technical staff working in laboratories and staff working	Likely	Direct and Indirect	Local	Minor to Medium	a. Hospital staff (medical and technical staff) b. Visitors c. Contractors (engaged ad-hoc) d. Service providers (engaged ad-hoc)

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
			in routine maintenance of hospital facilities. **Fire and Explosions** Fires and or explosions resulting from ignition of flammable materials or gases can lead to loss of property as well as injury or fatalities to project workers **Radiation** Radiation hazards can cause physical radiation, which poses the risk of occupational diseases (PAK) through both short-term biological effects and long-term chronic effects resulting from: a. Deterministic (acute) effects: direct damage to body tissues b. Stochastic effects (long-term chronic): the potential for genetic mutations or cancer in the future c. Radiation accidents: unintentional exposure to radiation These risks may be persistent, cumulative, or arise at any time during hospital operations					
B	**Social**							
1	Unequal hospital access by vulnerable group	a. Limited infrastructure accessibility b. Inadequate service provision for persons with disabilities or elderly c. Language, cultural, or financial barriers d. Discrimination or unintentional exclusion	a. Restricted or delayed access to essential health services for persons with disabilities, elderly, low income individuals, and other vulnerable groups b. May result in inequity in healthcare outcomes **Can lead to long-term social exclusion and loss of trust in healthcare institutions**	Unlikely	Direct and Indirect	Local and Off-Site	Medium	a. Vulnerable patients b. Elderly c. Persons with disabilities d. Low-income or marginalized communities

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Impact Likelihood	Impact Scope	Spatial Scale	Impact Magnitude	Receptor Sensitivity
2	Road and Traffic safety	Increased traffic flow during operational of the health services	Higher volume of vehicles during operation may cause traffic congestion and delays Increased risk of accidents involving workers, pedestrians, and road users Noise, dust, and emissions from operational traffic **Short to medium-term impact during construction phase**	Likely	Direct	Local	Minor	a. Driver b. Pedestrians c. Local inhabitants d. Motorcyclists fe Cyclists f. Animals
3	Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH SEA/SH)	Increased interaction (operation stage) between new buildings and old infrastructures– when there is increased interaction among patients, hospital staff, visitors, and service providers	The SEA/SH risk is anticipated during migration stage of new buildings when there is an interaction among patients, hospital staff, visitors, and hospital's contractors and service providers	Unlikely	Direct	Local	Minor	a. Hospital staff b. Patients c. Visitors d. Hospital's service providers
4	Cultural Heritage Delayed Settlement	Demobilization and post-construction on ground equalization	Delayed ground settlement, differential movement, or latent structural distress may occur after completion of construction activities, potentially resulting in cracking and deterioration of nearby heritage structures.	Unlikely	Direct	Local	Minor to medium	Cultural Heritage buildings and historic masonry structures
5	Damage or Miscalibration of Sensitive Medical Equipment: Functional failure, loss of precision, or structural damage to high-precision diagnostic/therapeutic devices during transfer or due to ongoing construction vibrations nearby.	Physical transport of sensitive medical equipment and heavy machinery operation adjacent to temporary clinical locations.	Nature: Negative, Direct & Indirect Duration: Temporary (During transit and peak construction hours)	Unlikely	Direct and Indirect	Site-specific	High	Critical diagnostic/imaging equipment

6.3 Health Services Relocation & Socio-Operational Management Plan (HSR-SOMP)

The temporary relocation of clinical and non-clinical facilities from CMU 1, IPG, and surrounding structures to interim locations poses significant operational, patient safety, and socio-environmental risks. The primary objective of this Health Services Relocation Management Plan is to:

1. Ensure uninterrupted delivery of critical healthcare services (including intensive care, cardiovascular care, hemodialysis, and emergency laboratory diagnostics).
2. Maintain compliance with international healthcare quality and patient safety standards (e.g., JCI Accreditation requirements).
3. Minimize adverse impacts on patient flow, occupational health and safety (OHS), healthcare worker transition, and surrounding community access during the pre-construction phase.

Based on the relocation roadmap, key operational and socio-environmental risks associated with the physical transfer of services have been identified along with mandatory mitigation actions:

- Continuity of Critical Care & Patient Transport Risks:
    - *Risk:* Disruption during the movement of ICU/CICU/HCU/SCU patients and high-risk cardiac/cath lab equipment to interim facilities (IPILB Floor 9 and Kanigara Building).
    - *Mitigation:* Physical transfer of critical care units will strictly take place post-JCI accreditation in April 2027. Dedicated life-support transport protocols, medical escort teams, and pre-commissioning checks of temporary ICU beds (22 beds in IPILB) and operating theaters must be executed prior to patient transfer.
- Specialized Infrastructure & Utility Readiness:
    - *Risk:* Failure or contamination of specialized medical gas, water treatment (RO systems for Hemodialysis), or biosafety levels during laboratory and HD transfer.
    - *Mitigation:* Civil works and MEP (Mechanical, Electrical, Plumbing) fit-outs at IPRJT Floor 4 (for Hemodialysis) and Eijkman Building (for PK Laboratory) must undergo strict validation, sterilization, and operational trials prior to June 2027. Extension/addendum of the HD Cooperation Agreement (KSO HD) shall be finalized in coordination with relevant authorities.
- Constructing Temporary Facilities (Nutritional Services Unit - IPG):
    - *Risk:* Environmental, noise, dust, and OHS impacts during the construction of the temporary 2-story IPG structure at the DSSG & RPK parking area, as well as traffic disruption due to loss of parking spaces.

- *Mitigation:* Temporary civil works for IPG must deploy dust control barriers, noise control during clinic off-peak hours, and clear traffic rerouting plans (redirecting RPK parking to the Power House area). Food safety and hygiene controls (HACCP standards) must be maintained throughout the transition to the temporary kitchen.

- Handling & Recalibration of Medical Equipment:
  - *Risk:* Damage to sensitive diagnostic instruments, radiation safety risks (Cathlab/Radiology), and accumulation of unowned/donated medical equipment.
  - *Mitigation:* Implement a formal Medical Asset Relocation Protocol including inventory auditing, vendor-managed decommissioning/re-calibration, radiation shielding verification at Kanigara/Radiology sites, and formal handling/disposal procedures for unowned or donated equipment.

To mitigate the effects of the relocation plan, the following is the ESMP Matrix: Health Services Relocation Plan

Table 41. ESMP Matrix: Health Services Relocation Plan

Relocation Sub-Activity	Potential Environmental & Social/Operational Impact	Proposed Mitigation Measures	Monitoring Indicator	Institutional Responsibility	Schedule
IPKT Outpatient & Inpatient Transfer	Disruption to patient flow, confusion in patient routing, transport risks for critical patients.	• Post-JCI accreditation relocation. • Clear wayfinding signage and patient navigation staff at CMU 1 & IPRJT/IPILB/Building A. • Use of dedicated medical transport teams for ICU/Cathlab transfers.	Zero critical incidents during patient transport; 100% functional bed readiness in IPILB.	Head of IPKT, Medical Services Directorate, Nursing Team	Nov 2026 – Apr 2027
Hemodialysis (HD) Unit Relocation	Interruption of life-sustaining dialysis treatments; RO water contamination risks.	• Complete IPRJT Lt. 4 renovations prior to moving. • Validate Reverse Osmosis (RO) water quality standards. • Secure formal extension/addendum for KSO HD.	Water quality compliance certification; uninterrupted dialysis schedule.	HD Unit Head, Infrastructure/Facilities Dept (IPSRS), KSO Partner	May 2027
PK Laboratory & Eijkman Building Refurbishment	Biohazard exposure during lab move; delay in diagnostic turnaround times (TAT).	• Prepare detailed RAB and vendor relocation plan. • Phased calibration of diagnostic analyzers.	Zero biohazard/spill incidents; diagnostic TAT maintained within target SLAs.	Head of Clinical Pathology Lab, Environmental Health (K3L)	Jun 2027

Relocation Sub-Activity	Potential Environmental & Social/Operational Impact	Proposed Mitigation Measures	Monitoring Indicator	Institutional Responsibility	Schedule
		• Inventory audit and clearance of unowned/donated equipment.			
Temporary IPG Building Construction (Parking Area)	Dust, noise, loss of parking capacity, food hygiene disruption.	• Erect hoarding barriers around DSSG/RPK site. • Implement traffic rerouting plan to Power House parking. • Verify HACCP/hygiene compliance for 2-story temporary kitchen prior to operational commissioning.	Food safety compliance certificate; zero traffic blockages in emergency zones.	Nutrition Unit (IPG), Facilities Management, Traffic Control	May 2027
Site Clearing & Demolition Prep (MODC, Musalla, Satellite Pharmacy)	Social inconvenience for staff/visitors, occupational safety risks.	• Relocate MODC to PTC Tower, Musalla to Asy-Syifa Mosque, and Pratama Clinic to ICTEC. • Public announcements and directional signage across hospital grounds.	Availability of alternative prayer & clinic facilities; stakeholder awareness.	Public Relations, General Services, ICTEC Admin	May 2027

7. Mitigation Measures

Based on the E&S risks and impacts identified and preliminarily assessed based on proposed project activities (design, construction, and operations), mitigation measures are put forward for each identified E&S risk and impact and are summarized in the table below for all risks and impacts identified during design, demolition/pre-construction, construction, and operations.

Table 42. Summary of Mitigation Measures

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
I	**Pre-Construction**						
A	**Environmental**						
1	Failure to Incorporate Climate Change Risk into Project	Engineering Design of the New Hospital	Various risks identified in Climate Risks Analysis are not fully addressed and/or incorporated into engineering design which leave these risks vulnerable to impact in the future when identified risk are actualized	Hospital Staff, Patient and Visitor	a. During feasibility study for the project and detailed engineering design stage, potential impacts of climate changes (increased temperature, extreme weather conditions, heavy rain, inundation, greenhouse effect, and so forth), will be thoroughly identified and assessed b. Risks will be mainstreamed into engineering design to provide an optimum and physical condition for patients, hospital staff and visitors	Feasibility Study/ Engineering Design stage	105.462.777 (include DED)
2	Failure to incorporate environmental and social considerations in the design	Engineering design of the new hospital (functionality and operations)	Negligent in incorporating environmental and social considerations into the design, such as the management of increased healthcare waste (both hazardous and non-hazardous), and the selection of equipment to reduce emissions, dust, noise, and vibration, and/or failing to account for universal accessibility and safety standards for hospital users, could result in long-	Hospital Staff, Patient and Visitor	The potential risks and impacts identified during drafting of the ESIA should be communicated to the engineering team to ensure that environmental considerations are incorporated into the feasibility study	Feasibility Study/ Engineering Design stage	50.000.000 (include DED)

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
			term operational inefficiencies, increased environmental and health risks, and non-compliance with international safeguard policies.				
B	**Social**						
1	Exclusion of vulnerable Groups, hospital staffs and patients from consultation meetings	Consultation conducted with project stakeholders, including: a. hospital staff, particularly female staff, b. patients (particularly patients with disabilities and elderly patients)	During stakeholder consultation (during project design) with potentially affected people	a. Vulnerable people and Group b. Hospital staff (especially female and elder staff)	a. Stakeholder Engagement Plan (see Annex) shall be carried out effectively with close support of PMU and oversight of Hospital Management. b. Stakeholder Engagement Plan has identified vulnerable groups and suggests how these groups are consulted during project planning and implementation.	Feasibility Study/ Engineering Design stage	Confidential info
2	Compensation and Support for tenant of demolished buildings	Three tenants identified in the building that will be demolished	Economic displacement and livelihood disruption resulting from demolition, relocation, or loss of access to commercial premises.	Hospital Staff, Patient, Visitor, and Tenants	compensation and livelihood restoration measures shall be provided to affected persons, as applicable, including compensation for the loss of assets or improvements made by lessees or occupants, return of rental deposits, refund of prepaid rent for any unused rental period, transitional assistance to facilitate relocation to alternative premises, transportation assistance for moving, additional assistance or allowances for vulnerable individuals or households, and	During project's pre-construction until when tenants settled down/PIU	Confidential info

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
					any other necessary support to restore affected persons' living standards and livelihoods. There are some scenarios: 1st: for those whose contract will be ended this year, there is no renewal contract for next year. 2nd: for those who has a lease for next year, tenants are allowed to utilize up until the project begin, the rest of the lease time will be compensated. 3rd: for those who have long term contract, their places will be relocated or will be compensated for the rest of the lease term.		
3	Design unknowingly introducing risks to safety or environment	Architectural design	Affect the ability to maximize patient safety	Hospital Staff, Patient and Visitor	a. During feasibility study detailed engineering design stage, potential risk related to human health and environment will be thoroughly identified and assessed b. Risks will be mainstreamed into engineering design to minimize risks related to safety and environment to provide the best physical condition for patients, hospital staff and visitors	Pre-construction/ PIU & Contractors	10.000.000 (include DED)
4	Unverified Damage Claims & Heritage Violations	Pre-construction site preparation and planning	Unverified pre-existing damage claims before work starts.	Protected RSCM Heritage Buildings	a. Conduct baseline structural condition surveys, crack mapping, and photographic documentation of heritage assets. b. Provide mandatory heritage awareness training for workers.	Pre-construction/ PIU & Contractors	50.000.000 (include DED)

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
II	**During Demolition & Construction**						
A	**Environmental**						
1	Asbestos Containing Material (ACM)	Demolishment of old building containing ACM	Temporary	Workers directly engaged in demolishing materials with ACM, Hospital Staff and Patient	**Key mitigation measures include:** a. ACM will be identified, safely removed and disposed of prior to demolition of any building. b. Prepare an Asbestos Management Plan (AMP) which clearly identifies the locations where the ACM is present, its condition (e.g. whether it is in friable form with the potential to release fibers), procedures for monitoring its condition, procedures to access the locations where ACM is present to avoid damage, and training of staff who can potentially come into contact with the material to avoid damage and prevent exposure. The plan should be made available to all persons involved in operations and maintenance activities. Repair or removal and disposal of existing ACM in buildings should only be performed by specially trained personnel following host country requirements, or in their absence, internationally recognized procedures c. As part of the AMP, it is important to: 1) measure exposure to airborne 7 fibers by air sampling in workers' breathing zone or in the space occupied by the affected individuals, with analysis of the sample by optical or electron microscope, 2) controlling exposure to airborne fibers. Because asbestos fibers are primarily an inhalation hazard, the basic purpose of the	Before Demolition/PIU Contractors engaged for ACM demolishment	100.000.000 (include DED)

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
					regulations and standards is to control the concentration of asbestos fibers in the air inhaled by workers or others, and 3) ensure proper disposal of ACM as it is important not only to protect the community and environment but also to prevent scavenging and reuse of removed material. ACM should be transported in leak-tight containers to a secure landfill operated in a manner that precludes air and water contamination that could result from ruptured containers **SOP for asbestos handling and treatment:** a. The asbestos waste is first wetted using water or a mixture of water and surfactant. b. The wetted asbestos is then placed into a tightly sealed container. c. This container is wrapped with two layers of plastic for additional containment. d. The wrapped container is placed on a pallet and securely bound with plastic or metal bindings. e. An extra layer of plastic wrapping is applied around the entire package to prevent any release of asbestos fibers. f. A hazardous waste symbol, label, and OSHA Asbestos Standard Warning Label are affixed to the package. g. The sealed and labeled container is loaded into a transport vehicle. h. An Environmental Assessment (EA) process is conducted by the relevant departments.		

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
					i. The Technical/Laboratory Department prepares the necessary documentation (recipe preparation). j. Final disposal must be entrusted to third parties (transporters and treatment operators) who hold an official license from the Ministry of Environment (KLH).		
2	Noise will be generated during the construction stage	a. Demolishment of old structure/ buildings to make space for construction of new buildings b. Earth excavation, particularly in preparation of the foundation of the new builds c. Clearing and grubbings (debris and vegetative covers from existing healthcare facilities) d. Operations and routine maintenance of machinery (e.g. excavator, bulldozers), and equipment (vibrators, hampers, vehicles)	a. Temporary, localized during daytime b. Potentially during nightime, particularly during peak construction stage	a. Workers b. Hospital staff c. Visitors d. Local inhabitants e. Vendor who come to provide logistics services	a. Schedule particularly noisy activities during periods of lower patient activity b. Use noise reduction technologies, such as sound barriers and acoustic insulation where possible c. Avoid night-time construction d. Minimize project transportation through community outside the project construction area where possible. e. Ensure proper maintenance and proper operation of construction machinery to minimize noise generation. f. Where possible, keep existing trees, bushes, vegetated areas, to prevent part of sound (that may be generated from ` site, vehicle, operating heavy equipment) from reaching nearby residential areas. g. No noisy construction-related activities will be carried out from 19:00 hours to 06:00 to minimize noise impact to people near construction sites (e.g. patients, medical staff, visitors). h. Noisy construction activities will be avoided during religious events in close proximity to the construction sites i. All construction equipment and vehicles shall be well maintained, regularly inspected for noise generation, and shall be fitted with	Construction Stage/ Contractors, PIU	20.000.000

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
		e. Workers' camp			effective muffler and other appropriate noise suppression equipment consistent with applicable national laws and regulations j. Use only vehicles and equipment that are registered and have necessary permits. Truck drivers and equipment operators should avoid use of horns in the project area (as it is located near the hospitals) k. Observe speed limits for construction vehicles to minimize noise emission inside and outside the project area. l. Restrict use of vibrating rollers and operation of heavy equipment near area with patients and medical staff m. Should the construction be done in night time, there will be some measures applied to make sure there are no disturbance to hospital's operation and patience's comfort in particular.		

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
3	Air pollution from dust will be generated	a. Earth excavation, particularly in preparation of the foundation of the new builds b. Vehicle movement c. Loading and unloading of materials (new construction materials, construction machinery & equipments) d. Operation of machinery e. Emissions form a project (project vehicles, petrol and diesel operation engines)	Temporary, localized during daytime at specific sites where physical construction activities are carried out	a. Workers b. Hospital staff c. Visitors d. Local inhabitants e. Vendor who come to provide logistics services	**For construction sites**, contractor should consider the following mitigation measures: a. Provide misting water sprays sufficient to reduce airborne dusting from demolition work b. Apply additional water dust suppression applied during dry weather c. Avoid dust-generating work must be avoided on high wind days **For indoor work areas** adjacent to nearby hospital area (not sensitive to dust): a. Demarcate construction areas from adjacent spaces with appropriate signage b. Provide sticky floor mats at immediate entrances to the construction area to reduce dirt and debris transfer from the work area to surrounding halls and corridors c. Provide barrier protection at the entrance to the construction area, an exhaust fan within the project area vented to the outdoors, and seal return grilles; d. Tape all doors except those essential for access; Seal all penetrations in the demising walls prior to demolition; e. Spray water (amended with a small amount of detergent) during demolition, as required, to reduce airborne particles; f. Remove construction debris through approved route, covered, netted, or otherwise contained to prevent dust generation, or remove during off-hours times. **For high sensitivity work areas** (typically involving special patient care areas (i.e.,	During preconstruction stage (e.g. setting up camp site, warehouse, Construction Stage/ Contractors, PIU	20.000.000

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					immunosuppressed or otherwise vulnerable patients) a. Provide an exhaust fan within the Project Site vented to the outdoors. Seal all air returns from the construction area with plastic sheeting, installing plastic from top of demising walls to deck above during the period of "above ceiling" demolition. The exhaust fan should be sized so that a negative pressure of 0.02 inches of water pressure differential is maintained relative to outside pressure (as measured at the entrance to the construction area). b. Evaluate the negative pressure of the entrance vestibule against surrounding areas to serve as a staging area. Workers should remove disposable coveralls and shoes covers (or clean their shoes) and any other contaminated clothing in this area before leaving the work area. The air flow into the vestibule should meet the same requirements as the ventilation within the Project Site itself. Additional ventilation needs should be evaluated on a project-by-project basis and may include mandatory HEPA filtration of all exhausted air and/or pressurization of adjacent patient care areas. The vestibule should be positioned as a transition zone between Work and patient areas, with air flowing through the vestibule (staging area) into the work area; c. The exhausted air must either be HEPA filtered or the fan positioned so that exhausted particulate does not re-enter the building;		

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					d. The work area and area immediately outside work area entrances should be vacuumed frequently (daily, if necessary) with HEPA-filtered industrial vacuum cleaners		

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					a. Use air quality monitors and employee feedback to monitor continuously dust contamination – particularly for area sensitive to patient health/recovery. b. Assess daily dust control efficiency of construction contractors that generate dust and take necessary action on the part of the contractors and hospital management c. Avoid/ minimize use of machinery that is diesel or petrol operated. Machinery to be maintained regularly, at least every 6 months or as required by manufacturer	Construction Stage/ Contractors, PIU	10.000.000
4	Vibrations will be generated from the foundation work	a. Earth excavation, particularly in preparation of the foundation of the new builds b. Vehicle movement c. Loading and unloading of materials (new construction materials, construction machinery & equipments) d. Operation of machinery	Temporary	a. Workers b. Hospital staff c. Visitors d. Local inhabitants e. Vendor who come to provide logistics services	a. Selection of equipment to reduce vibrations. b. Select hydraulic pressing or screw piling	During pre-construction stage / Contractors, PIU	20.000.000

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
5	Contamination of Soil and Sub–soils	Leakage of oil, chemicals used for machinery	Temporary	Local Soil Area	a. Store fuels, oils, and chemicals safely in areas on an impermeable surface with proper containment berms. Spillage of oil and chemical must be handled immediately to prevent infiltration b. Cover all restored areas with topsoil and re-vegetate (plant grass, fast-growing plants/trees) construction areas quickly once work is completed. c. Schedule construction activities during the dry season as much as possible	Construction Stage/ Contractors, PIU	30.000.000
6	Contamination of Surface water	a. Leakage of oil, chemicals used for machinery, b. earthworks, and increased surface runoff carrying sediment materials into nearby water bodies such as rivers, or drainage channels.	Temporary	Surface area close to the RSCM	Implement erosion and sediment control measures (silt fences, sediment traps, temporary drainage); store fuels and chemicals in bunded areas away from water bodies; undertake equipment maintenance in designated areas; implement spill prevention and emergency response procedures; prohibit discharge of pollutants into waterways; stabilize exposed soils and restore disturbed areas promptly; and regularly inspect and monitor water quality near the RSCM site.	Construction Stage/ Contractors, PIU	100.000.000
7	Wastes	Waste of various types will be generated including: a. Solid wastes (e.g. construction debris, unused construction materials),	Temporary	a. Workers working on the construction sites and beyond b. Any person who are exposed to natural disaster impact at the construction sites and the surrounding areas	Segregate waste (e.g. hazardous and non-hazardous), collect, store and transport waste to designated waste disposal sites. a. Set up a systematic waste management and chain of custody system considering waste reduction at source, recycling, temporary storage, transport, and final disposal. b. Develop procedures for the safe collection, storage, transport, and disposal of project hazardous waste at licensing/ permitting sites.	Construction Stage/ Contractors, PIU	20.000.000

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		b. Hazardous and non-hazardous wastes, c) Domestic wastes from a) construction activities at construction site, d) Living activities at workers' camp			c. Do not dispose of used oil on the ground and in water courses as it can contaminate soil and groundwater (including drinking water supplies). d. Have a diluted wash wastewater disposal ground tank with an internal water proofing layer to protect leakage. e. Store fuel and hazardous substances and wastes on a bundled paved area with roof and interceptor traps so that accidental spills do not contaminate the environment. If spills or leaks do occur, undertake immediate clean up. f. Train relevant construction personnel in handling of fuels and other hazardous substances as well as spill control and clean-up procedures. g. Ensure availability of spill clean-up materials (i.e. absorbent pads, etc.) specifically designed for petroleum products and other hazardous substances where such materials are being stored. h. Segregate hazardous wastes (oily wastes, used batteries, fuel drums) and ensure that storage, transport and disposal shall not cause pollution and shall be undertaken consistent with national and local regulations. i. Store waste oil, lubricant and other hazardous materials and wastes in tightly sealed containers to avoid contamination of soil and water resources. j. Ensure all storage containers of hazardous substances and wastes are in good condition with proper labelling. k. Regularly check containers for leakage and undertake necessary repair or replacement.		

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					l. Store hazardous materials above flood level. m. Storage areas for fuel, oil, lubricant, bitumen and other hazardous substances will be located at least 100 m away from any watercourses. n. Storage, transport and disposal of hazardous wastes, including spill wastes, shall be consistent with national and local regulations. A licensed third-party company will be hired to collect and dispose of hazardous wastes from the construction site. o. Wherever possible, refuelling will be carried out at a fuel storage area. p. Refuelling shall not be permitted within or adjacent to watercourses. q. Where significant amounts of oily wastewater or spill/leakage of oil and grease may occur (i.e. equipment maintenance areas), drainage leading to an oil- water separator shall be provided for treatment of wastewater. The oil-water separator shall be regularly skimmed of oil and maintained to ensure efficiency Vehicle maintenance and refuelling will be confined to designated areas in construction sites designed to contain spilled lubricants and fuel. r. Adequate precaution will be taken to prevent oil/ lubricant/hydrocarbon contamination of channel beds. Spillage if any will be immediately cleared with utmost caution to leave no traces. s. All areas intended for storage of hazardous materials will be quarantined and provided with adequate facilities (i.e. firefighting		

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					equipment, sorbent pads, etc.) to combat emergency situations complying with all the applicable statutory stipulations. t. For wastewater works, the project will have proper sludge handling and management procedures under to manage the excavated sludge materials and to prevent harmful exposure to workers and surrounding area (where patients and medical staff may be exposed to) u. Latrines must be built at construction site and camp site for appropriate domestic waste management		
8	Natural Disaster	This is contextual risk that is predictable, and sometime unpredictable	Extreme weather conditions (heavy rain, flood) could affect the construction temporarily during construction **Temporary**	Workers working on the construction sites and beyond	Ensure the Emergency Preparedness Plan is prepared in accordance with the national laws and regulations and relevant staff and personnels are well trained before project construction to be well prepared and respond effectively	Construction Stage/ Contractors, PIU	20.000.000
9	Disruption of Essential Healthcare Services: Risk of interrupted clinical, diagnostic, and emergency healthcare delivery during temporary service transfer.	Demolition of existing hospital buildings and physical relocation of active medical departments (e.g., outpatient clinics, inpatient wards) prior to construction.	Nature: Negative, Direct Duration: Temporary (Pre-construction phase during physical transfer, ~1–3 months)	Patients, particularly emergency and critical care cases	1. Formulate and finalize a detailed Health Services Relocation Plan (HSRP) prior to physical works. 2. Conduct spatial capacity and infection control audits for all temporary receiving units to match existing care standards. 3. Issue clear public announcements, digital notices, and direct SMS/WhatsApp alerts to registered patients at least 30 days prior to relocation. 4. Station dedicated patient navigators and helpdesks at primary entrances to guide patients.	Responsibility: • Primary: RSCM Operational Management & PIU • Support: Affected Clinical Departments	25.000.000

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B	**Social**						
1	Disease transmission	Presence and increased interaction between contractor's workers and local population	Communicable diseases (air-borne, water-borne) may be spread due to concentration of the labor influx and their interaction with local inhabitants during the construction stage. Labor influx may include workers that are engaged by construction contractors from other localities	a. Workers b. Hospital staff c. Visitors d. Local inhabitants e. Vendor who come to provide logistics services (including local and non-local people)	a. Conduct public awareness raising activities to ensure: 1) contractors, 2) medical staff, 3) patients and visitors, and relevant people, know about the risks of contracting and spreading communicable diseases – based on epidemic situations. b. In the event of disease outbreak, provide immediate training/ awareness raising to reduce effective the risk of disease transmission c. Contractor's workers will be trained on communicable diseases prior to mobilization to construction sites. d. For water-borne diseases that arise due to polluted or contaminated water, mitigations measures may include: e. Drink only clean and safe water – either portable water or water filtered through water purifiers. f. Ensure stored water is germ-free. g. Add antiseptic liquid, such as Dettol in dubious-looking bathing water. h. Hand hygiene – regularly wash hands with soap after returning home, after using the toilet, before and after preparing food, before eating or drinking anything. i. Ensure food is washed and thoroughly cooked. j. Use disposable glass and plates whenever possible when eating outside food, particularly street food.	Construction Stage/ Contractors, PIU	20.000.000

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					k. Avoid eating stale cooked food, unrefrigerated food kept exposed outside for long hours. l. Take vaccinations for immunization against preventable diseases (e.g., dengue fever, Zika, Chikungunya).		

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2	Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH SEA/SH)	The SEA/SH risk is anticipated due to concentration of contractor's workers, and their close interaction with local communities. Additionally, the influx of non-local workers residing the project area presents potential risks of communicable disease transmission and hightened social friction within the community during construction stage	Affect to individual(s)	a. Workers b. Hospital staff c. Visitors d. Local inhabitants e. Vendor who come to provide logistics services	a. Explicitly state zero tolerance for sexual harassment, sexual exploitation and abuse within workplace environment. b. Require Code of Conduct be signed by all construction workers. c. For victims coming forward: referral to qualified SEA/SH service provider. The GRM will include a confidential channel for reporting SEA/SH. d. Strict implementation of the Code of Conduct for workers with no tolerance for physical or verbal abuse of women or children e. Training to workers on maintaining good community relations, with emphasis on proper conduct around women and children. f. Training on SEA/SH and VAC for community members, in particular women and girls (may be done separately for men and women). g. Ensure groups of people with potential exposure to SEA/SH risk have access to grievance redress mechanisms. h. Support (in the form of training, awareness raising, etc.) to local law enforcement to act on community complaints regarding SEA/SH. i. Provision of information to local communities about the contractor's policies and responsibilities, including the Contractor's Code of Conduct and minimum working age j. Provide counselling services for male and female workers' wives and other female partners of contractor's workers. k. Build partnerships with local health providers and SEA/SH service providers to conduct community awareness activities, and referrals	Before and during construction stage/ Contractors (implementation) and PMU (supervision)	50.000.000

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3	Occupational Health and Safety	a. Fire and Explosion. Fires and or explosions resulting from ignition of flammable materials or gases can lead to loss of property as well as injury or fatalities to project workers. b. Corrosive, oxidizing, and reactive chemicals. Corrosive, oxidizing, and reactive chemicals present similar hazards and require similar control measures as flammable materials	**Physical Hazards**. Physical hazards represent potential for accident or injury or illness due to repetitive exposure to mechanical action or physical activities that may result in a wide range of injuries, from minor that needs medical aid only, to disabling, catastrophic, and/or fatal. a. Accidents due to falls: falling from ladders, scaffoldings, high floors, and vehicles, etc. b. Accident due to falling objects: Tools, machinery, equipment, and materials used during construction may fall from the height, causing injuries or death. c. Fall into open holes: holes, manhole, and areas of deep excavation may be commonly found at works. Fall into these holes may cause	a. Workers (Direct Impact) b. Hospital staff c. Visitors d. Local inhabitants e. Vendor who come to provide logistics services f. Anyone	a. As part of Contractor's Work Contract, Contractor is required to prepare a Contractor's Environmental and Social Management Plan. The C–ESMP will set out how Contractors identify and assess the risks – based on the E&S risks identified in this ESIA/ESMP. As part of C–ESMP, contractors will identify and assess OHS risks – based on their scope of work, and outline how contractors address these OHS risks, including risk related to SEA/SH. The C–ESMP will be reviewed by PMU –with the support of PMU's Construction Supervision Consultant. Only / when C–ESMP is cleared by Construction Supervision Consultant on behalf of PMU, contractor shall not mobilize their staff and construction workers to the project site. b. In principle, the CESMP will address the following aspects at minimum: 1. Contractor responsibilities for OHS measures. 2. Regular toolbox talks and safety meetings to raise awareness and reinforce safety protocols. 3. Provision of PPE for all construction workers. 4. OHS induction and safety training, particularly on high-risk activities such as working at heights, electrical and mechanical works, and demolition processes. To ensure absolute site safety, the Contractor must implement certified fall-protection gear and collective guardrails, mandate that certified personnel erect and tag scaffolding on stable	Before and during construction stage/ Contractors (implementation) and PMU (supervision)	20.000.000

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
			injuries of various degrees. d. Physical injuries related to the operations of heavy equipment: Injury or death may result during operations of heavy equipment, such as crane, excavator, cuts, and bruises on sharp objects etc. **Chemical Hazards**. Chemical hazards represent potential for illnesses or injuries, both short and long term, and fatalities due to single acute exposure or chronic repetitive exposure to toxic, corrosive, sensitizing or oxidative substances. Common chemicals used in construction include Portland cement clinker (mineral binders), formaldehyde (wood-based materials), polyurethane, vinyl, cadmium, or lead (paints and resins), and solvents		ground, enforce strict load limits through weekly inspections, and establish secure overhead drop zones to protect workers and the public below. 5. Hygiene and sanitation requirements for the provision of temporary accommodation for workers, when applicable. 6. Procedures for mitigating noise, fugitive dust, vibration, and water contamination/runoff, collecting and disposing construction waste. 7. Ambient air, noise, vibration and water quality monitoring, sampling and lab testing program		

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
			Fire and Explosions. Fires and or explosions resulting from ignition of flammable materials or gases can lead to loss of property as well as injury or fatalities to project workers				
4	Safety hospital staff, patient and visitors (the public)	a. Demolition of old structures/ buildings while hospital services remain in operations b. Construction of new structures/ buildings while hospital services remain in operation	a. Risk of structural failures and falling objects during demolition causing injury to nearby hospital staff, patients, and visitors b. Hospitals access and regress pathways are affected which may cause fall, slips and trip accidents	a. Workers (Direct Impact) b. Hospital staff c. Visitors d. Local inhabitants e. Vendor who come to provide logistics services f. Anyone	a. Put in place clear segregation of working zones by fencing, markings, and signages of no-go areas at demolition and construction zones b. Assigning zone marshals to patrol demolition and construction areas	Before and during construction stage/ Contractors (implementation) and PMU (supervision)	50.000.000
5	Road & Traffic Safety	I Mobilization of heavy construction vehicles, material haulage, site excavation, and movement of equipment between supply points, paired with internal space reconfiguration for contractor	External & Internal Impacts: • Internal Premises: Disruption of internal hospital traffic circulation, reduction/loss of visitor and staff parking spaces, congestion at internal drop-off zones, and heightened risk of vehicular-pedestrian accidents involving	a. Contractor Workers (Direct Impact) b. Driver c. Pedestrians d. Local inhabitants e. Motorcyclists f. Cyclists g. Animals	a. A Traffic Management Plan (TMP) will be prepared by the main Contractors and submitted to PMU for review and approval – as part of the Contractor's Environment and Social Management Plan – before the contractor could mobilize their vehicle, equipment and staff to the construction site. b. Conduct road safety awareness raising for medical staff, patients, and visitors – through sign posts and public announcements people present inside hospital premises and local people outside hospital areas are aware of increased traffic flow (due to the presence of	Before and during construction stage/ Contractors (implementation) and PMU (supervision)	50.000.000

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		holding zones and equipment staging.	mobility-impaired patients, visitors, and ambulances within hospital grounds. • External Corridor: Increased traffic flow congestion along Salemba-Diponegoro roads, noise/vibration, and dust emissions along haul routes. **Short to medium-term impact during construction phase.**		heavy trucks and traffic) and take precautions accordingly. c. Internal Traffic & Parking Management Plan (ITPMP): • Mandate clear physical separation (heavy-duty fencing and barricades) between construction transport routes and internal hospital circulation paths (patient drop-off zones, emergency pathways). • Designate alternate, well-signposted temporary parking zones for hospital staff and visitors to replace parking areas occupied by construction staging. d. Ambulance & Emergency Access Priority: • Maintain dedicated, unhindered "Green Lanes" 24/7 for emergency ambulances entering and navigating the hospital premises. Zero heavy vehicle idling permitted in internal access corridors. e. Internal Pedestrian Safety & Universal Accessibility: • Construct covered, illuminated, and barrier-free temporary pedestrian walkways equipped with ramps within internal premises to safely guide patients, elderly visitors, and wheelchair users around construction zones. f. Internal Traffic Control: • Deploy trained flagmen at key internal intersections and gate junctions connecting the construction site to the hospital's internal roads. • Enforce a strict speed limit (maximum 10–15 km/h) for all construction and delivery vehicles operating inside the hospital premises.		

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6	Child labor	Hiring of child labor for temporary, unskilled work by contractors	a. Violation of national labor laws and international labor standards b. Harm to physical and mental health of children involved c. Legal and reputational risks to the hospital project d. Social backlash from the community	Labor under 18 years of age	1. All project workers engaged by both main contractors and subcontractors will be verified for their age – based on national Identification Card – as per Labor Management Plan. 2. People under 18 years of age shall not be hired (See Labor Management Plan)	During construction/ contractors (implementation)	10.000.000
7	Underpaid pay and unequal treatment	Recruitment of workers on the part of construction contractors (both main contractors and subcontractors), PMU Consultants, and Contractor's Staff	Local people recruited as unskilled workers (by contractors) may not be offered a written working contract. As such, there is a possibility that they may be underpaid compared to the nature, scope, and quantity of work that they are expected to perform. They may also be asked to work under conditions that are hazardous to them, such as working without Personal Protective Equipment (as may be required for such work). Underpayment may also take place on the	Labors	a. As part of Contractor's Work Contract (applicable to both main and sub–contractors), contractors are required to comply with the requirements specified in the Law No.13 of 2003 on Manpower (with amendments and improvements introduced through Government Regulation in lieu of Law No. 2 of 2022 on Job Creation b. Contractors to ensure that the Manpower Law, particularly in Articles 5 and 6, that states the right of every employee to receive equal treatment without discrimination from the employer	During construction stage/ Contractors (implementation) and PMU (oversight)	10.000.000

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			basis of gender, temporary work status – at the discretion of contractors. The risks of late wage payment or failing to pay workers should be assessed and included as part of the contract.				
8	Cultural Heritage Structural Damage	Demolition of attached non-heritage structures and corridors	Risk of tearing or compromising historic masonry, potential cracking, structural distress, or damage to heritage building elements resulting from demolition and nearby construction activities. Impacts may be temporary or permanent depending on severity.	Cultural Heritage buildings, structures, and historic architectural elements and relics	a. Establish protective buffer zones and prohibit direct contact with heritage structures. b. Demolition activities near heritage assets shall utilize controlled dismantling methods to minimize vibration, structural shock, dust generation, and accidental impact on heritage building. c. Implement strict "Structural Decoupling" prior to mass demolition. d. Utilize low-vibration tools (diamond wall saws) at the interface. e. Install temporary shoring and weatherproofing on exposed historic walls.	During demolition & construction/ contractors, structural engineer & conservation expert	100.000.000
9	Cultural Heritage Vibration Impacts	Deep basement excavation, impact piling, underground works, and heavy machinery operations	Construction-generated vibration may result in micro-cracking, foundation settlement, structural instability, or destabilization of heritage buildings located near the construction zones.	Cultural Heritage buildings, structures, and historic architectural elements and relics	a. Enforce Heritage Protection Zones (Core and Buffer Zone). b. Conduct continuous, real-time vibration monitoring adhering to DIN 4150-3 standards. c. Install seismographs at designated cultural heritage buildings to continuously monitor vibration in accordance with DIN 4150-3 standards for structure particularly sensitive to vibration. Peak Particle Velocity (PPV)	During construction/ contractors & TACB	100.000.000

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					shall not exceed 3 mm/s within the frequency range of 1-10 Hz. d. If vibration levels approach or exceed the allowable threshold, immediate corrective actions shall be implemented, including the temporary suspension of heavy equipment operations within the affected area until vibration levels return to acceptable limits.		
10	Disturbance to Potential Archaeological Resources / Chance Finds	Earth excavation and underground work,, trenching, basement construction, utility installation	Previously undocumented historical foundations, buried structures, or archaeological materials associated with the cultural heritage buildings may be damaged, displaced, or destroyed during excavation activities. The impact may be permanent if not properly managed.	Archaeological remains and historic foundations	A Chance Finds Procedure is proposed in this ESIA/ESMP to guide contractor's workers how to address and provide appropriate protection of the cultural relic if a cultural relic is found underground during earthworks operation	During construction/ contractors, PMU, Archaeologist	20.000.000

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11	Job Opportunities	Potential increased income for current street vendors and new street vendors who may migrate to area near construction sites to provide food and drink service to construction workers	Temporary	Street Vendors	Contractors to ensure that the Manpower Law, particularly in Articles 5 and 6, that states the right of every employee to receive equal treatment without discrimination from the employer	Before and during construction stage/ Contractors (implementation) and PMU (supervision)	10.000.000
12	Delayed Access to Care	a. Relocation of certain existing staff to PIU staffing b. Temporary, short–term closure or relocation of certain hospital areas c. Temporary shutdowns of utilities	a. Potentially leading to delays in providing essential medical care b. Rerouting patient traffic c. Temporary utility shutdown may impact medical equipment, lighting, and climate control systems d. Construction activities and presence of labor force (from contractors) may pose challenges to patient transportation, potentially causing delays in accessing necessary care.	a. Patients b. Medical staff involved in healthcare and emergency services	a. PIU needs to conduct thorough project planning, collaborating closely with construction teams to develop plans and strategies that minimize disruption to patient care services. b. Employing additional staff to ensure uninterrupted access to healthcare c. Maintain effective and regular communication with patients, staff, and the community to keep all stakeholders informed about changes in service locations and potential delays d. Hospitals shall proactively address transportation issues by providing alternative routes, clear signage, and efficient patient transport services. e. Maintain effective communication with patients and visitors about changes in parking facilities and transportation options to mitigate any inconvenience and ensure smooth access to healthcare services	Construction Stage/ Contractors, PIU	10.000.000

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			e. Affect emergency evacuation routes or procedures				
III	**During Migration of Hospital Functions**						
A	**Environmental**						
1	Safety	Construction activities of contractors still not fully completed and decommission is not yet finished	Construction activities of contractors still not fully completed and decommission is not yet finished	a. Patients b. Medical staff involved in healthcare and emergency services	a. Put in place clear segregation of working zones by fencing, markings, and signages of no-go areas at demolition and construction zones b. Assigning zone marshals to patrol demolition and construction areas c. Apply patient's transfer procedure (see procedure in the project description above)	Hospital Management PMU	10.000.000
B	**Social**						
1	Safety to patients and medical staff (e.g. nurses, doctors) due to medical errors, communication breakdowns, and physical hazards during transfer/transport and transition for full functioning of medical services	Transferring of patients and hospital staff to new constructed building	These risks may be exacerbated by factors like patient instability, complication during transport, complex medical conditions, and logistical challenges	Patients and medical staff involved in patient transferring	PMU will work closely with Hospital Management to prepare a Patient Transfer Plan to patients are safe before, during, and after transferring process	a. Hospital Management b. PMU	20.000.000

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
2	Road and Traffic safety	Increased traffic flow between construction sites and other destinations such as borrow pit, quarry, material supply warehouses, disposal sites	Higher volume of construction vehicles may cause traffic congestion and delays Increased risk of accidents involving workers, pedestrians, and road users Noise, dust, and emissions from construction traffic **Short to medium-term impact during construction phase**	a. Contractor Workers (Direct Impact) b. Driver c. Pedestrians d. Local inhabitants e. Motorcyclists f. Cyclists g. Animals	a. Put in place clear segregation of working zones by fencing, markings, and signages of no-go areas at demolition and construction zones b. Assigning zone marshals to patrol demolition and construction areas c. Apply patient's transfer procedure (see procedure in the project description above)	a. Contractors b. PMU	Including in TMP

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
3	Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH SEA/SH)	Increased interaction (migration stage) between new buildings and old infrastructures– when there is increased interaction among patients, hospital staff, visitors, and hospital's contractors and service providers	The SEA/SH risk is anticipated during migration stage of new buildings when there is an interaction among patients, hospital staff, visitors, and hospital's contractors and service providers	a. Hospital staff b. Patient c. Visitors d. Vendor who come to provide logistics services e. Contactors	a. Explicitly state zero tolerance for sexual harassment, sexual exploitation and abuse within workplace environment. b. Require Code of Conduct be signed by all construction workers. c. For victims coming forward: referral to qualified SEA/SH service provider. The GRM will include a confidential channel for reporting SEA/SH. d. Strict implementation of the Code of Conduct for workers with no tolerance for physical or verbal abuse of women or children e. Training to workers on maintaining good community relations, with emphasis on proper conduct around women and children. f. Training on SEA/SH and VAC for community members, in particular women and girls (may be done separately for men and women). g. Ensure group of people with potential exposure to SEA/SH risk have access to grievance redress mechanisms. h. Support (in the form of training, awareness raising, etc.) to local law enforcement to act on community complaints regarding SEA/SH. i. Provision of information to local communities about the contractor's policies and responsibilities, including the Contractor's Code of Conduct and minimum working age j. Provide counselling services for male and female workers' wives and other female partners of contractor's workers. k. Build partnerships with local health providers and SEA/SH service providers to conduct community awareness activities, and referrals	a. Hospital management b. PMU c. Hospital staff d. Visitors e. Contractor's workers	Including in SEA / SH Program)

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
IV	**During Operation**						
A	**Environmental**						
1	Healthcare Waste Treatment	Healthcare waste (including hazardous and non– hazardous waste) will be treated in accordance with the national laws and regulations	Potential release of contaminants into the environment due to improper treatment chemical or microbiological residues in wastewater **Long-term accumulation of waste if treatment is inadequate**	Water body that receive the treated wastewater discharged from hospital's wastewater treatment plant (Ciliwung River)	a. Set up and have in place a safe and effective on-site management of medical wastes (separation, collection, treatment), including transportation and disposal off-site. b. Infectious and biohazard waste will be generated from labs, ICU, and isolation wards, including liquid contaminated waste (e.g. blood, other body fluids, and contaminated fluid) and infected materials (water used; lab solutions and reagents, syringes, bed sheets etc.) c. Standard Operating Procedures (SOPs) on handling healthcare waste are available entitled "Handling of Medical Hazardous Waste (B3 Waste) in Work Units", along with other supporting SOPs relating to the management of B3 waste (on annex 8) and will be updated during the detail design as required.	a. Hospital staff b. Patients c. Visitors	5.000.000.000
2	Wastewater Treatment	Wastewater treatment will be treated in accordance with the national laws and regulations	Wastewater will be generated during the operation of the new hospital	a. Hospital staff b. Patient c. Visitors	a. Reducing Wastewater at the Source b. Use closed drainage systems to prevent leaks and environmental contamination. c. Separate solid and liquid waste, as well as hazardous and non-hazardous waste. d. Physical Treatment e. Biological Treatment f. Chemical Treatment g. The Wastewater Treatment Plant (WWTP) will be expanded from the current capacities of WWTP 1 (500 m^3) and WWTP 2 (800 m^3) to a central WWTP with a capacity of 2,000 m^3 to	During Operation/ Hospital Management	82.000.000.000

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
					treat hospital wastewater. The expansion of the WWTP will be included in the detailed design phase. h. Standard Operating Procedures (SOPs) on operating and maintaining the IPAL are available, entitled "Wastewater Management" (Annex 8 no. 2) and will be updated during the detail design as required		
3	E–waste	IT equipment (e.g. computers, peripherals, cables, batteries, etc.), medial equipment and appliances, electrical equipment will be purchased and used to improve the health and patient management functions and diagnosis.	Used computers, medical equipment, appliances, electrical equipment (mal–function, or unusable due to end of life) will be generated	Area where these unused equipment and utilities are disposed of	a. E–Waste Management Plan will be prepared once the IT equipment plan is finalized. In particular, any e-waste generated as a result of end of life-wasted IT facilities should be stored in separate containers. The containers should be labeled as "e-waste". The labeling system should be clear and well known to the public and workers to ensure general safety. b. Transportation of the hazardous waste container should be with a special vehicle by a special contractor. Before the start of transporting this e-waste a form should be filled by the generator and transporter, indicating the amount of e-waste. A written permission for transporting the e-waste to a registered treatment facility should be issued by the PIU. c. Transboundary disposal of e-waste is not allowed. d. E- waste record keeping should be created and checked by the PIU to ensure that e-waste is well managed. e. Existing technical facilities for treating and disposing of e-waste should be assigned before the start of the project.	Management the Hospitals with project's IT and networking investment	50.000.000

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
					f. All workers should be trained to be familiar with e-waste warning signs and take necessary actions.		
4	Disease transmission	Inadequate management of healthcare waste due to increased amount of healthcare waste	The new Hospital will comprise in–patient area (55 beds), Intensive Care Units (ICU), isolation ward, laboratories, and other healthcare facilities. Operations of the new hospital which have increased the number of beds –from existing 270 beds to 550 beds, will increase a considerable amount of healthcare waste. The waste generated by health-care activities include both hazardous and non-hazardous waste of which about 85% is general, non-hazardous waste a. The hazardous healthcare waste may be infectious, toxic, carcinogen, flammable, corrosive, reactive, explosive or radioactive.	a. Hospital staff b. Patient c. Visitors d. Vendor who come to provide logistics services	Separation at Source: Separate infectious and pathological waste, cytotoxic waste, radioactive waste, pharmaceutical waste, non-infectious waste and general waste using colour-coded bins a. Safe Storage: Store waste in secure containers and safety boxes labelled with the biohazard symbol in an authorized and designated temporary waste storage area. b. Proper Disposal: Record and document the collection list from a licensed third-party service provider authorized to dispose of medical waste. c. Transport: Carry out transport once bags are three-quarters full, using trolleys or vehicles appropriate to the type of waste, and ensure they are labelled for waste transport both within and outside the facility. Ensure staff always carry the waste consignment form d. Training: Educate healthcare workers and cleaners on safe handling and risks e. Standard Operating Procedures (SOPs) on handling healthcare waste are available entitled "Handling of Medical Hazardous Waste (B3 Waste) in Work Units", along with other supporting SOPs relating to the management of B3 waste (on annex 8) and will be updated during the detail design as required.	During Operation/ Hospital Management	

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
			b. Infectious waste: waste known or suspected to contain pathogens and pose a risk of disease transmission, e.g. waste and waste water contaminated with blood and other body fluids, including highly infectious waste such as laboratory cultures and microbiological stocks and waste including other materials that have been in contact with patients infected with highly infectious diseases in isolation wards; c. Pathological waste: human tissues, organs or fluids, body parts, foetuses, unused blood products and contaminated animal carcasses; d. Sharps waste: used or unused sharps, e.g. hypodermic, intravenous or other needles; auto-disable syringes; syringes with attached needles;		**For non-hazardous waste:** a. As domestic waste will increase, the storage area (TPS) will be expanded from 38 m^2 to 120 m^2. The expansion of the TPS will be incorporated in the project's detailed design. b. Reduce, recycle, and reuse waste [e.g. plastic wastes, electronic waste, agricultural/organic waste (natural, animal faeces for later use as manure, plant waste) wherever and whenever possible. **For hazardous waste:** a. The hazardous medical waste will increase, requiring the TPS area to be enlarged. The expansion of the TPS will be incorporated in the project's detailed design. b. The medical wastewater will increase, as such, the wastewater treatment plant capacity (IPAL) will be expanded. This expansion will be incorporated in the project's detailed design.		

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
			infusion sets; scalpels; pipettes; knives; blades; broken glass; d. Chemical waste: for example, solvents and reagents used for laboratory preparations, disinfectants, sterilants and heavy metals contained in medical devices (e.g. mercury in broken thermometers) and batteries; e. Pharmaceutical and cytotoxic waste: pharmaceuticals that are expired or no longer needed; items contaminated by, or containing, pharmaceuticals. Cytotoxic waste containing substances with genotoxic properties, e.g. waste containing cytostatic drugs (often used in cancer therapy); genotoxic chemicals; f. Radioactive waste: such as products contaminated by radionuclides including radioactive diagnostic				

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
			material or radiotherapeutic materials; and g. non-hazardous or general waste: waste that does not pose any particular biological, chemical, radioactive or physical hazard				
		Inadequate management of healthcare waste due to management capacity	a. Lack of awareness on health hazards related to health-care waste b. Lack of adequate training in proper waste management, absence of waste management and disposal systems c. Insufficient financial and human resources in current healthcare waste management practices	a. Hospital staff (medical and technical staff) b. Visitors c. Contractors (engaged ad-hoc) d. Service provider (engaged ad-hoc)	a. Standard Operating Procedures (SOPs) entitled "Handling of Medical Hazardous Waste (B3 Waste) & Non-Medical Hazardous Waste in Work Units" on handling healthcare waste are available and will be maintain and updated during the detailed design as required for all stages of waste handling c. Assign Trained Personnel. Designate a Waste Management Officer or team with defined responsibilities. d. Staff Training & Certification. Regular capacity-building workshops and certifications on healthcare waste handling. e Resource Allocation. Budget for equipment, infrastructure (e.g., operation of the collection and waste storage, contract for licensed third-party service providers to collect and dispose medical waste), and specialized medical containers. f. Emergency Waste Plans. To develop strategies to address situations arising from delays in transport, damage to transport vehicles, disasters, operational disruptions by vendors, and sudden spikes in volume leading to increased waste volumes. In accordance	During Operation/ Hospital Management	50.000.000

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
					with the Standard Operating Procedure (SOP) for "Emergency Management of Solid Waste Accumulation", the procedures to be followed are as follows: Declaration of an emergency status by IKLK3, activation of a special log (emergency log), source control, special control of hazardous waste (B3), both medical and non medical, environmental and health control, rescheduling based on priority, mandatory health and safety measures, documentation and restoration of conditions regarding the waste backlog, disinfection, and system evaluation.		
5	Nosocomial Infections	Appearance of Nosocomial Infections	Cross-infection that occurs in nurses or patients during hospital treatment within ±72 hours after being in the hospital is very likely to occur	a. Patients b. Hospital staff	Sterilization of equipment and rooms, improvement of understanding and healthy behavior when handling patients, discipline of officers in handling waste Infectious	Hospital Management	10.000.000
6	Occupational health and safety	During the operation of the new hospital, accidents may happy during the day–to–day healthcare activities performed by hospital staff	**Physical Hazards** Physical hazards represent potential for accident or injury or illness due: a. Accidents due to falls: falling from ladders, high floors, and vehicles, etc. b. Accident due to falling objects: Tools, machinery, equipment, and materials used	a. Hospital staff (medical and technical staff) b. Visitors c. Contractors (engaged ad-hoc) d. Service provider (engaged ad-hoc)	As part of hospital operations, various Standard Operating Procedures (SOPs) are implemented to ensure occupational health and safety, as well as emergency preparedness. These SOPs cover a wide range of emergency and critical situations, including: 1. Procurement of Personal Protective Equipment (PPE) for Workers Handling Hazardous and Toxic Materials (B3) 2. Emergency and Disaster Preparedness 3. Fire Extinguisher (APAR) Training 4.Emergency and Disaster Drill Management	Operation Stage / Hospital Management	Include in routine OPEX activities-

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
			may fall from the height, causing injuries or death to workers of contractors engaged ad-hoc, and people in the surrounding area. c. Physical injuries related to the operations of heavy equipment: Injury or death may result during operations of heavy equipment as part of routine maintenance **Chemical Hazards** Chemical hazards represent potential for illnesses or injuries, both short and long term, and fatalities due to single acute exposure or chronic repetitive exposure to toxic, corrosive, sensitizing or oxidative substances, especially for technical staff working in laboratories and staff working in routine maintenance of hospital facilities. **Fire and Explosions**.		5. Assignment of Emergency Response Team (RPK) Duties 6. Preparation of Fire and Emergency Safety Evaluation (FSES) 7. Fire Protection System Management 8. Management of First Aid Kits and Contents 9. Emergency Response System for Hazardous and Toxic Materials (B3) Incidents 10. Emergency Response for Wastewater Management 11. Emergency Response to Accumulation of Medical Hazardous Waste (B3 Waste) 12. Emergency Response for Non-Medical/Domestic Solid Waste Management 13. Use of Fire Extinguishers (APAR) 14. Code Purple (Evacuation) Response 15. Flood Response 16. Code Grey (Security Threat) Response 17. Code Pink (Infant or Child Abduction) Response 18. Code Green (Earthquake) Response 19. Code Red (Fire) Response 20. Code Black (Bomb Threat) Response 21. Observation, Risk Control, and Documentation of Unsafe Conditions and Behaviors by Work Units 22. Management of Occupational Accidents Resulting in Serious Injuries and Mobility Impairments 23. Construction Activity K3 (Occupational Health and Safety) Monitoring 24. Prevention of Spontaneous Fires in Laundry Services 25. Disaster Evacuation for Patients 26. Health Care for Radiation Workers		

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
			Fires and or explosions resulting from ignition of flammable materials or gases can lead to loss of property as well as injury or fatalities to project workers **Radiation** Radiation hazards can cause physical radiation, which poses the risk of occupational diseases (PAK) through both short-term biological effects and long-term chronic effects resulting from: a. Deterministic (acute) effects: direct damage to body tissues b. Stochastic effects (long-term chronic): the potential for genetic mutations or cancer in the future c. Radiation accidents: unintentional exposure to radiation These risks may be persistent, cumulative, or arise at any time during hospital operations		27. Monitoring Radiation Workers' Doses 30. Radiation Protection in the Integrated Cardioserebrovascular Care Unit These SOPs are regularly updated and disseminated to ensure all hospital personnel are prepared to respond effectively to emergencies and maintain a safe hospital environment. See Annex 8 for an indicative list of SOPs.		

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
B	**Social**						
1	Unequal hospital access by vulnerable group	a. Limited infrastructure accessibility b. Inadequate service provision for persons with disabilities or elderly c. Language, cultural, or financial barriers d. Discrimination or unintentional exclusion	a. Restricted or delayed access to essential health services for persons with disabilities, elderly, low income individuals, and other vulnerable groups b. May result in inequity in healthcare outcomes **Can lead to long-term social exclusion and loss of trust in healthcare institutions**	a. Vulnerable patients b. Elderly c. Persons with disabilities d. Low-income or marginalized communities	a. Integrate universal access principles (ramps, lifts, handrails, tactile paving) into the design and retrofitting plans. b. Conduct regular accessibility audits during construction and operation. c. Provide staff training on assisting vulnerable groups. d. Clearly mark accessible routes and ensure their availability during construction and operation phases	Design, Construction, Operation / Contractor & Hospital Management	10.000.000
2	Road and Traffic safety	Increased traffic flow during operational of the health services	Higher volume of vehicles during operation may cause traffic congestion and delays Increased risk of accidents involving workers, pedestrians, and road users Noise, dust, and emissions from operational traffic **Short to medium-term impact during construction phase**	a. Driver b. Pedestrians c. Local inhabitants d. Motorcyclists e. Cyclists f. Animals	a. Conduct road safety awareness raising for medical staff, patients, and visitors – through sign posts and public announcements people present inside hospital premises and local people outside hospital areas are aware of increased traffic flow (due to the presence of heavy trucks and traffic) and take precautions accordingly. b. Monitor and observe speed limits.	Operation Stage / Hospital Management	Including in TMP

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
3	Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH SEA/SH)	Increased interaction (operation stage) of new constructions – when there is increased interaction among patients, hospital staff, visitors, s and service providers	The SEA/SH risk is anticipated during operation stage of new constructions when there is a interaction among patients, hospital staff, visitors, and hospital's contractors and service providers	a. Hospital staff b. Patients c. Visitors d. Hospital's service providers s	a. Explicitly state zero tolerance for sexual harassment, sexual exploitation and abuse within workplace environment. b. Require Code of Conduct be signed by all construction workers. c. For victims coming forward: referral to qualified SEA/SH service provider. The GRM will include a confidential channel for reporting SEA/SH. d. Strict implementation of the Code of Conduct for workers with no tolerance for physical or verbal abuse of women or children e. Training to workers on maintaining good community relations, with emphasis on proper conduct around women and children. f. Training on SEA/SH and VAC for community members, in particular women and girls (may be done separately for men and women). g. Ensure groups of people with potential exposure to SEA/SH risk have access to grievance redress mechanisms. i. Support (in the form of training, awareness raising, etc.) to local law enforcement to act on community complaints regarding SEA/SH. h. Provision of information to local communities about the contractor's policies and responsibilities, including the Contractor's Code of Conduct and minimum working age i. Provide counselling services for male and female workers' wives and other female partners of contractor's workers. j. Build partnerships with local health providers and SEA/SH service providers to conduct community awareness activities, and referrals	Operation Stage / Hospital Management	Including in SEA / SH Program

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
4	Cultural Heritage Delayed Settlement	Demobilization and post-construction ground equalization	Delayed ground settlement, differential movement, latent structural distress may occur after completion of construction activities, potentially resulting in cracking and deterioration of nearby heritage structures.	Cultural Heritage buildings and historic structures	a. Post-construction condition assessments shall be conducted to identify any unintended impacts on heritage buildings. b. The assessment shall include structural inspection, crack comparison analysis, photographic comparison, and verification of facade conditions. c. Enforce a 3-month post-construction monitoring period (crack gauges, settlement observation). d. Any damage resulting from construction activities shall be repaired using conservation-appropriate methods under the supervision of Conservation Architect and Heritage Expert team. e. Compile all monitoring data and remediation logs into a final "Heritage Closing Report" for submission to the local authorities.	Operation Stage/ Hospital Management & Independent Heritage Expert team, Conservation Architect	Including in Cultural Heritage Expert

No	Environment & Social Risks and Impacts	Project Activities that Cause Risks/Impacts	Nature & Duration of Risks/Impacts	Receptor Sensitivity	Proposed Mitigation	Project Stage / Responsibility	Estimated Cost (IDR) (Actual cost will be determined by the consultant / contractor)
5	Damage or Miscalibration of Sensitive Medical Equipment: Functional failure, loss of precision, or structural damage to high-precision diagnostic/therapeutic devices during transfer or due to ongoing construction vibrations nearby.	Physical transport of sensitive medical equipment and heavy machinery operation adjacent to temporary clinical locations.	Nature: Negative, Direct & Indirect Duration: Temporary (During transit and peak construction hours)	Critical diagnostic/imaging equipment, ICU devices	1. Engage certified medical equipment vendors to handle the disassembly, transit, re-installation, and re-calibration of high-value devices. 2. Conduct pre- and post-relocation calibration checks with formal sign-off before re-commissioning. 3. Install vibration dampening pads/mounts for equipment relocated adjacent to construction zones. 4. Schedule heavy vibration-generating construction tasks outside critical diagnostic testing hours.	• Primary: Medical Equipment Logistics Vendors & RSCM Biomedical Engineering • Support: Main Contractor	5.000.000

8. Climate Considerations

8.1 Climate Risk Analysis

The hospital complex is located in Jakarta, an urbanized area vulnerable to a variety of climate-related dangers. This report offers an overview of exposure of RSMC hospital to the key climatic hazards associated with the RSCM construction project. The attached Annex provides a more extensive climate risk assessment, including data sources, methodologies applied and detailed findings. The appendix uses reliable climate statistics and worldwide climate risk models, including inputs from the Swiss Re Climate database, bases on which it is proposed to apply specific project's planning and resilience strategies that are consistent with international standards. The Swiss Risk Assessment Report for RSCM evaluates the site's vulnerability to various natural perils. The findings indicate that the hospital faces an extreme hazard risk from lightning, experiencing an estimated 209.48 lightning days per year. Seismic vulnerability is also prominent, with the earthquake hazard rated as high under local soil conditions and Significant under bedrock conditions. Conversely, the report lists the risk for both windstorms (with peak gusts of 19.00 m/s) and landslides as very low, while the danger from wildfires is negligible. Lastly, the site currently falls outside the designated risk zones for both fluvial and pluvial flooding. The following table below outlines the main present climate hazards, the associated impacts and data sources .

Table 43. Current Climate Risk

Climate Risk	Severity/Status	Key Data & Evidence	Primary Impacts
Flooding	**High**	• 32.10% probability of flooding from extreme rainfall (>122 mm/day) over 5 years, rising to 97.90% over 50 years • 37 villages in Central Jakarta experienced flooding from 2024–May 2025 • Floodwaters from Ciliwung reach Central Jakarta in 13–14 hours • RSCM area is included in Moderate – High level risk area of flood risk map published by DKI Jakarta province authority.	Displacement of residents, infrastructure damage, economic losses (~US$186 million annually citywide)
Land Subsidence	**High**	• Jakarta sinks at average 3.5 cm/year • Northern Jakarta (upstream of Central) sank 4 meters over 40 years; 40% now below sea level	Exacerbates flooding, structural damage to buildings, increased tidal flood vulnerability
Urban Heat Island (UHI)/Extreme heat	**High**	• High-density zones reach 47°C daytime vs. 32°C in vegetated areas • Nighttime heat retention exceeds 27°C in impervious areas • Central Jakarta has lowest green space at 16%	Heat stress, reduced productivity, higher energy demand, health risks

Climate Risk	Severity/Status	Key Data & Evidence	Primary Impacts
		• Temperature increased +0.5°C over 15 years	
Extreme Rainfall	**High**	• Heatwaves increased by +15.4 days over 15 years • Rainfall extremes intensified by ~25% across northern Indonesia • RSCM area is included in High level risk area of extreme rainfall risk map published by DKI Jakarta province authority.	Flash floods, landslides, infrastructure strain
Water Scarcity	**Moderate**	• Excessive groundwater extraction drives subsidence • Water demand may increase up to 52.1% by 2050	Drinking water contamination, competition for potable water

- Jakarta's climate change severity score is 43/100 (High) with worsening trends (+2.2% over 15 years)
- Flooding is the greatest climate/disaster risk facing Jakarta, imposing very high human and economic costs
- RSCM area is included in Moderate to High flood risk by the local disaster mitigation agency.
- Urban factors like land subsidence and land-use change will worsen flood impacts in the future

The future risk projections for two climate scenarios across the 2030–2085 timeline indicate some changes. The two most relevant climate scenarios chosen to analyze are SSP2-4.5 and SSP5-8.5. SSP2-4.5 represents the baseline trajectory where social and economic trends follow historical patterns with slow progress toward sustainability, making it the most probable current tracking scenario. Meanwhile, SSP5-8.5 models a future with no emission reductions, serving as the essential worst case stress test required for safeguarding long term infrastructure resilience.

Middle of the road scenario (SSP2-4.5) reflects a future where climate mitigation tracking moves slowly, and global warming reaches an estimated 2.7°C by the end of the century.

- Heat Waves: Represents the most immediate threat to hospital operations, starting at a "Significant" risk score of 6.80 in 2030, accelerating to "Extreme" (8.50) by 2040, and peaking at 9.80 by 2070.
- Drought: Progresses steadily from a Minor risk in 2030 (3.50) to a "Moderate" risk through the 2040s, before escalating to a "Significant" risk level (6.30–6.40) from 2055 through 2085.
- Wildfire: Follows a parallel rising trajectory, stepping into a "Significant" risk rating (6.50) by 2055 and climbing to 7.90 by 2085.
- Storm Surge (Sea Level Rise): Stays "Negligible" for the majority of the timeline but experiences a sharp late-century jump, reaching a "Moderate" risk level (4.40) by 2085.
- Heat Stress: Safely maintains a "Negligible" score (0.00) throughout the entire century-long projection.

Fossil fueled development scenario (SSP4-8.5) assumes CO2 emissions triple by 2075, driving severe environmental degradation and pushing global temperatures up by an estimated 4.4°C.

- Heat Waves: Escalates to "Extreme" levels even faster than the baseline, hitting a score of 8.50 by 2035 and holding a near-maximum "Extreme" risk level (9.90) from 2070 onward.
- Drought: Experiences rapid acceleration, climbing from "Minor" (3.90) in 2030 to Significant (6.50) by 2040, and locking into an "Extreme" risk tier (8.10–9.00) from 2050 through 2085.
- Wildfire: Becomes a severe threat to regional air quality and safety, entering the "Extreme" risk category (8.20) by 2055 and peaking at 9.50 by 2085.
- Storm Surge (Sea Level Rise): Presents a highly critical threat for Jakarta's landscape; while remaining "Negligible" through 2060 (1.00), it exponentially spikes to an "Extreme" risk level of 9.40 by 2085.
- Heat Stress: Due to unmitigated heating, this is the only scenario where heat stress breaches safety thresholds, spiking to a "Moderate" risk level (4.60) by 2085

The Summary of Adaptation Analysis presents a systematic assessment of climate risks, their possible implications, and proposed adaptation actions for several work packages in the RSCM development project. The research focuses on major cli 1ymate threats such as increasing temperatures, excessive heat, flooding, and soil instability (landslides). Each risk category is evaluated based on its influence on building operations, materials, worker safety, and infrastructure resilience, followed by customized adaptation measures.

Table 44. Hazards and Adaptation Measures Key Insights

Hazard Type	Proposed y Adaptation & Mitigation Measures for the hospital
Earthquake & Local Soil Conditions	**Structural Vulnerability Audits:** Conduct seismic vulnerability audits of legacy building blocks with licensed structural engineers. **Equipment & Utility Safeguards:** Install anchors, clearance gaps, and flexible couplings for critical medical equipment and utilities **Emergency Protocols:** Establish rapid-response protocols and structural repair blueprints specifically for intensive care units (ICUs).
Lightning	**Grounding & SPD Upgrades:** Upgrade and routinely test lightning grounding networks and surge protection devices (SPDs). **Power & Data Safeguards:** Install industrial backup power and surge isolation barriers to protect critical clinical electronics and data infrastructure.

Hazard Type	Proposed y Adaptation & Mitigation Measures for the hospital
Heatwaves & Thermal Stress	**HVAC & Cooling Redundancy:** Future-proof central HVAC capacities and secure redundant cooling margins across critical clinical areas. **Facility Cooling Centers:** Establish and equip climate recovery zones (*cooling centers*) to protect staff, visitors, and vulnerable patients. **Adaptive Health Guidelines:** Implement flexible shift structures to mitigate cognitive fatigue and drop in labor productivity.
Drought & Water Scarcity	**On-Site Bulk Storage:** Construct bulk grounded water tanks and secondary treatment plants to ensure continuous clinical, sterilization, and dialysis operations. **Water Recycling Systems:** Deploy localized water recycling systems for non-clinical uses, including laundry, landscaping, and chiller make-up water.
Fluvial & Pluvial Flooding	**Continuity & Ingress Mapping:** Maintain emergency business continuity plans and map localized water ponding ingress points around ambulance bays. **Drainage & Access Monitoring:** Monitor real-time municipal drainage forecasts to proactively manage regional road blockages affecting supply chains and patient access.

Hazard Type	Proposed y Adaptation & Mitigation Measures for the hospital
Earthquake & Local Soil Conditions	**Structural Vulnerability Audits:** Conduct seismic vulnerability audits of legacy building blocks with licensed structural engineers. **Equipment & Utility Safeguards:** Install anchors, clearance gaps, and flexible couplings for critical medical equipment and utilities **Emergency Protocols:** Establish rapid-response protocols and structural repair blueprints specifically for intensive care units (ICUs).
Lightning	**Grounding & SPD Upgrades:** Upgrade and routinely test lightning grounding networks and surge protection devices (SPDs). **Power & Data Safeguards:** Install industrial backup power and surge isolation barriers to protect critical clinical electronics and data infrastructure.
Heatwaves & Thermal Stress	**HVAC & Cooling Redundancy:** Future-proof central HVAC capacities and secure redundant cooling margins across critical clinical areas. **Facility Cooling Centers:** Establish and equip climate recovery zones (*cooling centers*) to protect staff, visitors, and vulnerable patients. **Adaptive Health Guidelines:** Implement flexible shift structures to mitigate cognitive fatigue and drop in labor productivity.
Drought & Water Scarcity	**On-Site Bulk Storage:** Construct bulk grounded water tanks and secondary treatment plants to ensure continuous clinical, sterilization, and dialysis operations. **Water Recycling Systems:** Deploy localized water recycling systems for non-clinical uses, including laundry, landscaping, and chiller make-up water.
Fluvial & Pluvial Flooding	**Continuity & Ingress Mapping:** Maintain emergency business continuity plans and map localized water ponding ingress points around ambulance bays. **Drainage & Access Monitoring:** Monitor real-time municipal drainage forecasts to proactively manage regional road blockages affecting supply chains and patient access.

8.2 Green Building and Climate Mitigation

8.2.1 Project Data

The project is projecting to build four buildings: Superblock 1 building, Education and Training Center, Guest House, Parking Building, Power House, and Wastewater Treatment System Building. Total construction floor area is 133.352 m^2. The proposed buildings will comply the regulations issued by the Ministry of Environment and Forestry alongside the Ministry of Public Works and Public Housing to set the legal standard of legal framework on Green Buildings in Indonesia. The building will have better efficiency and better quality by incorporating of natural lighting, better insulation, and high efficiency HVAC systems to reduce energy consumption, proper ventilation, natural airflow, and using non-toxic material to safeguard occupant health. Efficiency in water usage will be improved as well, a new installation will serve as the main wastewater treatment systems which has a better efficacy and energy efficiency.

8.2.2 Methodology

GHG emissions from hospital facilities are primarily from electricity consumption.

Formula:

GHG emissions = Electricity Consumption x Grid Emission Factor

Where:

Electricity intensity (baseline building): 194 kWh/m^2/year

The quantity of electricity consumed in 2025 is 51.863.626 kWh which covers 267.592 m^2 building area.

Electricity intensity (with green building project): 177 kWh/m^2/year

The electricity intensity for proposed building is assumed at 145 kWh/m^2/year, reflecting the domestic green building mandate (Permen PUPR Nomor 21 Tahun 2021 tentang Penilaian Kinerja Bangunan Gedung Hijau) which focuses on reducing energy consumption by 25%. The planned demolished area is 25.733 m^2 which makes the total building area with baseline electricity intensity 241.859 m^2, and total building area after construction would be 375.211 m^2.

Grid emission factor = 0,00093 tCO2e/kWh

RSUPN Dr. Cipto Mangunkusumo conducted calculation of GHG emission using energy consumption, transportation, and waste treatment. The GHG emission in 2025 is 48.236,71 tCO_2e. Using the data we can assume the grid emission factor by dividing the number by electricity consumption in a year.

8.2.3 Analysis

The table below presents the estimated annual electricity consumption and associated greenhouse gas (GHG) emissions under the baseline scenario and the project scenario incorporating Green Building Measures. The assessment is intended to quantify the energy performance improvement and the corresponding reduction in GHG emissions resulting from the implementation of the proposed measures.

Under the baseline scenario, representing the existing building's condition, the annual electricity consumption was at 25,870,288 kWh/year. This value is derived from a building floor area of 133,352 m² which shows that electricity consumption intensity of the hospital was 194 kWh/m²/year. Applying the electricity emission factor of 0.00093 tCO_2/kWh, the corresponding annual GHG emissions are estimated at 24,059.37 tCO_2/year.

Under the project scenario, the implementation of the Green Building Measures is expected to improve the building's energy performance, resulting in a reduction in electricity consumption intensity from 194 kWh/m²/year to 177 kWh/m²/year. Accordingly, the estimated annual electricity consumption decreases to 23,603,304 kWh/year. Based on the same emission factor of 0.00093 tCO_2/kWh, the resulting annual GHG emissions are estimated at 21,951.07 tCO_2/year.

The difference between the baseline and project scenarios indicates an estimated annual electricity saving of 2,266,984 kWh/year and a corresponding GHG emission reduction of 2,108.30 tCO_2/year. This represents an approximately 8.76% reduction in annual electricity consumption and associated GHG emissions relative to the baseline scenario.

The results demonstrate that the implementation of the Green Building Measures provides a measurable improvement in building energy performance and contributes to the reduction of operational carbon emissions. The quantified reduction in electricity consumption and GHG emissions may therefore be considered as part of the project's overall contribution to energy efficiency, climate change mitigation, and ESG objectives. The calculation assumes that the applicable electricity emission factor remains constant between the baseline and project scenarios.

	Electricity Use (kWh/year)	**Emission (tCO_2/year)**
Baseline (without project)	133.352 x 194 = **25.870.288**	25.870.288 x 0,00093 = **24.059,36784**
Project (with Green Building Measures)	133.352 x 177 = **23.603.304**	23.603.304 x 0,00093 = **21.951,07272**
GHG Emission reduction		**2.108,29512**

9. Stakeholder Consultation and Information Disclosure

9.1 Stakeholder Consultation

9.1.1 Institutional Baseline: Historical Practices on Stakeholder Consultation

Beyond this specific modernization project, RSCM maintains an established institutional culture and ongoing practice of public consultation and information disclosure:

- Routine Community & Local Authority Engagement: Over the past 5 years, RSCM has routinely conducted periodic coordination meetings with local government bodies (*Pemerintah Kota Administrasi Jakarta Pusat*, *Kecamatan*, and *Kelurahan* offices) as well as neighborhood leaders (RT/RW) regarding local security, traffic management, and community health initiatives.
- Statutory Public Information Disclosure (PPID): As a national center public hospital under the Ministry of Health, RSCM strictly adheres to Public Information Disclosure mandates (Law No. 14/2008), operating a dedicated Public Relations and Information Officer (PPID) channel to publish operational updates, environmental reporting, and healthcare developments.
- Internal & Academic Consultations: Established forums exist for continuous engagement with internal stakeholders—including medical personnel, non-clinical staff, unions, and the adjacent Faculty of Medicine Universitas Indonesia (FKUI)—to address operational disruptions and safety protocols.

9.1.2 Purpose of Stakeholder Consultation

The consultation project stakeholders aims to:

- Provide clear and accessible information regarding project design, activities (including pre-construction and construction stages), environmental and social hazards, and impacts throughout implementation.
- Engage project stakeholders, including patients, hospital personnel, vendors, community members, and government agencies.
- Collect comments and recommendations from stakeholders to inform project design and implementation.
- Encourage stakeholder support, trust, and constructive feedback throughout project design and implementation.

9.1.3 Methods of Stakeholder Consultation

To encourage widespread involvement, the public consultation process is carried out via different channels:

- Public Meetings: Held at various project phases to report findings and solicit comments.
- Project information is disclosed online and in print, including hospital websites, social media, newspapers, and public notice boards.
- Provide dedicated communication options (email, telephone, grievance redress system) for stakeholders to raise queries and issues.

9.1.4 Identification of Project Stakeholders

- Stakeholders who are affected include:
  - Target project beneficiaries include patients, hospital staff, visitors, and service providers.
  - Environmental contamination during construction can have a negative impact on patients, staff, and local inhabitants living near the hospital.

- Interested stakeholders include:
  - Government authorities, including ministries, regulatory agencies, and local governments, who are in charge of approving and monitoring compliance.
  - Non-Governmental Organizations (NGOs) are advocacy groups for healthcare, environmental preservation, and community welfare.

9.1.5 Results of Stakeholders Consultation

Based on consultation sessions in The Attorney General's Office of the Republic of Indonesia and RSCM on April, 7 2026, Meeting room RSCM on April, 23 2026, Bureau Meeting Room, Ministry of Health on April, 27 2026, and Meeting Rooms B and C, Kiara Building, 12th Floor on June, 11 2026 consultation results obtained from each consultation meeting are summarized in the table below:

Table 45. Conducted Consultations Summary

No	Affected Stakeholders	Date of Consultation	Venue of Consultation	Participants	Male	Female	Key Topics Discussed	Feedback and Questions Asked by Consulted People	Response From Personnel Facilitating Meeting
1	Government authorities (The Attorney General's Office of the Republic of Indonesia)	April, 7 2026	The Attorney General's Office of the Republic of Indonesia, 10.00 AM -12.00 PM	Deputy Director of Sub-Directorate IV D, Head of Section at Directorate IV D and staff of the Attorney General's Office of the Republic of Indonesia (RSCM) Chief Executive Officer, Director of Service Planning and Strategic Development, Programme Planning and Evaluation Manager, Legal and Public Relations Manager, Head of Hospital Facilities and Infrastructure Maintenance, Head of Procurement Services Unit	13	3	- Presentation of the strategic project at Dr Cipto Mangunkusumo National General Hospital (RSCM) - Request for support regarding the RSCM Foreign Loan (PLN) project	- Mitigation measures regarding the clauses in the loan agreement to coordinate immediately with the Department of Public Data and Administration - Ensure that construction is completed in accordance with the 2040 plan so that BAPENAS can approve the foreign loan - Take note of the permits relating to the RSCM building, which is a national heritage site - Coordination with the KPKNL regarding asset disposal - Coordination with the PPS team regarding service provider tenders and the necessary permits, including environmental impact	- A request for support for the continuation of the construction of Dr Cipto Mangunkusumo General Hospital shall be submitted in writing without delay to the Deputy Attorney General for Intelligence in order to obtain approval - Progress reports on the construction of Dr Cipto Mangunkusumo General Hospital shall be submitted through the appropriate channels to senior management

No	Affected Stakeholders	Date of Consultation	Venue of Consultation	Participants	Male	Female	Key Topics Discussed	Feedback and Questions Asked by Consulted People	Response From Personnel Facilitating Meeting
								assessments and traffic impact assessments	
2	The local Government	April, 7 2026	Meeting Room B, 12th Floor, Kiara Building, Dr Cipto Mangunkusumo Hospital, 12.30 PM-14.30 PM	Local Government (Head of Menteng Sub-district, Acting Head of Senen Sub-district, Secretary of Kenari Urban Village, Head of Security at Pegangsaaan Urban Village, Head of the Public Order Agency (Satpol PP) for Kenari Urban Village, Staff) Representatives from the ART, IKLK3RS and IPSRS departments at RSCM	10	5	- Complaints from the public regarding street vendors who stop and sell their wares on Jalan Diponegoro and Jalan Kimia, thereby obstructing traffic flow	- Awareness-raising activities have been carried out regarding the ban on trading on the roadside - Engagement with street vendors to facilitate relocation from areas posing safety and security risks, with appropriate communication and consideration of alternative locations with the local government (Satpol PP and sub-district government . - The local government will support the RSCM development project with a view to improving services	- To prevent this, barriers will be installed shortly to ensure that public transport vehicles (such as Bajaj) do not park in the area - Creation of a 3-metre-wide green space on the pavement along the edge of the pedestrian walkway, to be carried out with the support of RSCM - Attention must be paid to vehicle access and exit points for the project, as well as environmental impacts such as dust on the local community - Should there be any complaints from the public, these must be communicated immediately and addressed jointly

No	Affected Stakeholders	Date of Consultation	Venue of Consultation	Participants	Male	Female	Key Topics Discussed	Feedback and Questions Asked by Consulted People	Response From Personnel Facilitating Meeting
3	Director-General of Continuing Health Care	April 23, 2026	Meeting Room C, 12th Floor, RSCM Kiara Building, 10.00 AM-12.00PM	Director-General of Continuing Health Care : Head of the Budget Working Group, Staff RSCM : Programme Planning and Evaluation Manager, Budget Planning Manager, Head of Internal Audit, Legal and Public Relations Manager, General Administration Manager, Head of the Procurement Unit, Head of the Information Systems, Procurement, and Supply Chain Management Unit	15	11	- Submission of the Multiyear Contract (MYC) proposal for the Dr. Cipto Mangunkusumo National General Hospital (RSCM) Foreign Loan Project - Request for support and oversight of the RSCM MYC proposal for the RSCM Foreign Loan Project	- MYC approval from the Minister is required if a contract funded from the BLU or RM budget extends beyond the financial year - Supporting documents required for MYC: recommendation from PUPR, application letter, KAK RAB, justification - The DED RSCM planning consultant is funded from the BLU budget and the work extends beyond the financial year, therefore requiring MYC approval	- Immediately process the recommendations from the Ministry of Public Works the budget for which is broken down by year - Prepare a letter requesting approval and the Detailed Engineering Design (KAK) and Bill of Quantities (RAB)
4	Procurement Bureau of Goods and Services, Ministry of Health of the Republic of Indonesia	April 27, 2026	PBJ Bureau Meeting Room, Ministry of Health, 14th Floor, Prof. Sujudi Building, 10.00 AM-12.00 PM	Procurement Bureau, Ministry of Health: Head of the Procurement Team, Staff RSCM : ULP, Programme Planning and Evaluation Working Group, Budget Planning Working Group, State-Owned Assets Management Working Group, IPSPRS	17	6	- Submission of the proposal for a Multi-Year Contract (MYC) for the Dr. Cipto Mangunkusumo National General Hospital (RSCM) Foreign Loan project - Request for support and oversight of the RSCM MYC proposal for the RSCM Foreign Loan (PLN) project	- Annual payment contracts - Activity specifications detailed annually in accordance with the annual budget - Inclusion of risk mitigation measures in the contract - Ministerial approval of multi-year contracts - Recommendations from the Ministry of Public Works and Public Housing regarding annual budget allocations	- Process the PU recommendations without delay the budget is itemised on an annual basis - Prepare a letter of application for approval and the KAK RAB

No	Affected Stakeholders	Date of Consultation	Venue of Consultation	Participants	Male	Female	Key Topics Discussed	Feedback and Questions Asked by Consulted People	Response From Personnel Facilitating Meeting
5	The Civil Service Police Unit, the DKI Jakarta Provincial Department, the Village Heads and village officials of Pegangsaan and Kenari, community organisations and community forums of the Pegangsaan and Kenari Villages	June 11, 2026	Meeting Rooms B and C, Kiara Building, 12th Floor	The Civil Service Police Unit, DKI Jakarta Provincial Departments (the Health Department, the Public Works Department, the Parks and Urban Forestry Department, the Fire and Safety Department, the Culture Department, the Department of Public Works, Spatial Planning and Land Affairs, the Investment and One-Stop Integrated Services Department), the Heads of the Pegangsaan and Kenari Sub-districts and their respective sub-district councils, the Community Organisations of the Pegangsaan and Kenari Sub-districts, the Community Early Warning Forum of the Pegangsaan and Kenari Sub-districts, the Family Empowerment and Welfare Organisation of the Pegangsaan and Kenari Sub-districts, and the residents of the Pegangsaan and Kenari Sub-districts. RSCM Organising Committee & Sucofindo	47	24	- Presentation of a strategic project at Dr Cipto Mangunkusumo National General Hospital (RSCM) - Discussion of the potential social and environmental impacts, including those on heritage buildings, that may arise during the construction of this project - Request for support regarding the RSCM Foreign Loan (PLN) project	- Involve cultural heritage experts and consult the masterplan concept with the Department of Culture - Hold a meeting with the governor to ensure direct oversight - Is this plan finalised? Do the distances between buildings comply with the regulations? - Immediately submit an application for demolition approval, detailing the demolition work and its impact on the heritage site - Conduct parallel design consultations in accordance with the building regulations in force in Jakarta - The building must comply with green building standards (BGH) - Consider pedestrian comfort in relation to the car park building situated at the end - Provide access for fire engines and evacuation routes with sufficient width for fire engines at several entry points, and	- Cultural heritage experts have been involved from the planning stage through to completion - A letter will be sent shortly to the Department of Culture to request guidance - Demolition is planned for after accreditation in October - This will be discussed further with Cipta Karya - Provisions for fire brigade access routes have been included and will be explained by the team - The preliminary design (DED) is currently being drawn up. The DED is scheduled for August and will involve the Department of Culture, the Ministry of Public Works (PU), and other relevant ministries - An invitation has been sent to the fire service regarding the site plan and access routes so that they can provide detailed input - 9 buildings are undergoing the MKKG process; for Phase 1 of the superblock, circulation routes such as access roads and parking positions have been established and are being discussed with the DED consultant - Regarding permits, we are awaiting a loan from lenders; following the ESIA, we will

No	Affected Stakeholders	Date of Consultation	Venue of Consultation	Participants	Male	Female	Key Topics Discussed	Feedback and Questions Asked by Consulted People	Response From Personnel Facilitating Meeting
								install external fire escapes and ramps - Separate petrol-powered and electric vehicle parking areas - Draw up a timeline for the permitting process - If vendors' land is to be cleared, a solution must be sought with RSCM and local residents. Provide space for small-scale vendors. - Heavy machinery may damage roads - The impact of dust from construction must be monitored over the course of the first year of construction and addressed should there be complaints from residents - Regarding the impact of dust on respiratory tract infections (ISPA), will health checks be carried out in each residential area? - The consultant should advise the contractor to avoid disturbing residents - Is there an opportunity for resident involvement in the project?	commence the AMDAL and DED processes and immediately apply for the PBG (Building Construction Approval) - There will be no evictions. We are endeavouring to arrange relocation and will facilitate suitable accommodation/place. Relocation arrangements addressed in Chapter 2. - Work involving heavy machinery will, where possible, be carried out at night. - Contractors must have an environmental assessment, and at the end of the project, they must repair any damaged roads (as stipulated in the contract). - The hospital environment will be maintained to ensure environmental health standards are upheld, so as not to disrupt activities or cause respiratory infections. Noise exposure is particularly difficult to anticipate, so construction activities will be carried out at appropriate times (at night). - The Environmental Health Department will conduct free health checks for the public regarding the impact of respiratory infections, as well as providing free, regular medical treatment for the local community. These checks will

No	Affected Stakeholders	Date of Consultation	Venue of Consultation	Participants	Male	Female	Key Topics Discussed	Feedback and Questions Asked by Consulted People	Response From Personnel Facilitating Meeting
								- What compensation will be provided to the affected residents? - Request contact details for the hospital's point of contact regarding reporting on the construction's impact - Mitigation measures must be implemented to ensure construction workers do not litter the environment (pavements) - Stakeholder discussions regarding reallocation have taken place but no solution has yet been found. As all buyers purchase goods from RSCM, an alternative solution is required.	continue to be carried out as part of our responsibility towards the environment and the local community. - The base camp must be situated within the worksite to avoid disrupting external access. There will be a designated area outside the site for community engagement with the project. - A certain percentage of the KAK will be allocated to local workers. - Compensation will be discussed as this is a government building - A hotline number will be provided for all complaints. We will also endeavour to list the hospital's hotline on Google; we will later add an extension specifically for public complaints regarding hospital activities. - We will arrange for cleaning staff to ensure rubbish is not left strewn along the roadside; they will identify suitable locations, coordinate with relevant parties, and maintain cleanliness at these sites - We will endeavour to identify a location within RSCM for the hospital's CSR programme; we will attempt to provide facilities for local traders, with the assistance of the sub-

No	Affected Stakeholders	Date of Consultation	Venue of Consultation	Participants	Male	Female	Key Topics Discussed	Feedback and Questions Asked by Consulted People	Response From Personnel Facilitating Meeting
									district head to select those eligible to trade within RSCM, thereby preventing traders from operating in the surrounding area

Sources : RSCM internal document, 2026

9.2 Information Disclosure

9.2.1 Baseline Practice & AIIB ESF GAP Assessment

Beyond this specific project, RSCM—as a national referral public hospital operating under the Ministry of Health (Kemenkes)—actively practices statutory public information disclosure in accordance with Law No. 14/2008 on Public Information Openness (*Keterbukaan Informasi Publik - KIP*) through its dedicated Information and Documentation Officer (*PPID*) unit. Existing practices include disclosing annual operational reports, health service updates, and major institutional developments via the official Kemenkes/RSCM websites, public information boards within hospital premises, and social media.

An assessment of RSCM's past and ongoing practices against the principles and requirements of AIIB's Environmental and Social Framework (ESF) reveals the following baseline alignment and gaps:

- Alignment: Strong institutional compliance with national transparency laws, existing digital disclosure infrastructure, and clear administrative channels for public information requests.
- Identified Gaps:
  1. Non-Technical Disclosure: Existing disclosures are heavily administrative/service-focused and lack simplified, non-technical summaries (*Bahasa Indonesia*) specifically covering Environmental and Social (E&S) risks, civil impacts, and worker safety.
  2. Proactive Local Outreach: Disclosure channels primarily target hospital visitors and digital users, leaving vulnerable off-site stakeholders (e.g., surrounding informal street vendors/*PKL* and nearby high-density *kampung* residents) underserved by standard online disclosures.
  3. Targeted SEA/SH & GRM Disclosure: Information regarding dedicated, confidential grievance pathways—specifically for Gender-Based Violence (GBV/SEA/SH)—is not currently disaggregated or prominently displayed in public physical zones surrounding construction boundaries.

9.2.2 Project Information Disclosure Framework

During the project preparation and design phase, stakeholders will be informed about the proposed project activities, civil construction works, facility development plans, indicative implementation schedules, and potential E&S risks and impacts. Stakeholder feedback will be actively sought and incorporated, where appropriate, to support project design refinement and implementation planning.

The draft ESIA/ESMP documents, including non-technical summaries in Bahasa Indonesia, will be disclosed publicly through accessible channels. The PMU will disclose the Draft ESIA/ESMP on the Ministry of Health website (https://kemkes.go.id/id) and physical hard copies will be made available at accessible community venues (such as the RSCM Public Relations/Humas office, Local

Government Offices in Kenari and Pegangsaan, and public notice boards near main gates). The same version of the Draft ESIA/ESMP will also be published on the AIIB website to ensure broad public access. Following review and clearance by AIIB, the final versions will be re-disclosed.

Throughout the construction phase, both affected and interested stakeholders will receive regular updates and opportunities to participate in periodic consultations organized by the hospital management and the PMU. Should the ESIA/ESMP be revised during implementation, updated versions will be communicated and disclosed to all affected stakeholders.

9.2.3 Information Disclosure Action Plan (to be Integrated into the ESMP)

To close the identified gaps and align fully with AIIB ESF requirements, the following measures are integrated into the ESMP Action Plan:

- Executive Non-Technical Summaries: Translate and publish executive summaries of the ESIA/ESMP, and SEP in clear, non-technical Bahasa Indonesia for distribution to surrounding communities and vendor associations.
- Targeted Physical Boards at Project Boundaries: Install weatherproof, accessible project information and GRM boards along the outer fence boundaries (Salemba-Diponegoro corridors) detailing construction schedules, site contacts, traffic detours, and direct hotline numbers.
- Proactive Localized Disclosure: Distribute physical informational leaflets/flyers directly to informal street vendors (*PKL*) and leaders of adjacent *kampung* settlements (*RT/RW*) prior to major civil activities.
- Prominent GRM and SEA/SH Signage: Clearly disclose localized, confidential grievance channels (including specialized contact paths for women and vulnerable groups) at both contractor staging areas and public access points.

10. Grievance Redress Mechanism (GRM)

10.1 Assessment of Existing Institutional GRM at RSCM

RSCM currently operates an established, hospital-wide Grievance Redress Mechanism primarily oriented toward healthcare services, patient administration, and general public relations:

- Unit & Staffing: Complaint management is officially assigned to the Public Relations & Customer Relations Division, staffed by dedicated customer service and PR officers. Complex legal or operational disputes are escalated to the hospital's Ethics and Legal Committee.
- Existing SOP & Structure: Complaints are processed under internal SOPs (*e.g., SOP Handling Public Complaints*). The process involves: (i) Receipt and logging; (ii) Verification and routing to the targeted department within 24–48 hours; (iii) Investigation and corrective action; and (iv) Formal feedback to the complainant within 3–7 working days.
- Channels/Venues: On-site complaint desks, official call center (1500-135), email, official WhatsApp lines (081953354047), and integration with the national public complaint system (*SP4N-LAPOR!*).
- Historical Track Record (Beyond the Project): The existing system receives approximately 120–150 operational/service-related complaints annually, achieving a historical resolution rate of over 90% closed/resolved. However, records are almost exclusively focused on clinical care, waiting times, parking fees, and administrative procedures.

10.2 Assessment of Gaps Against AIIB ESF Standards

An evaluation of RSCM's existing GRM against the requirements of AIIB's Environmental and Social Framework (ESF 2021/2024) reveals key gaps that must be addressed for project implementation:

1. Scope and Environmental & Social Focus: The institutional GRM lacks specialized mechanisms and technical indicators to receive, assess, and resolve civil construction impacts (e.g., structural vibration damage, dust pollution, traffic blockages, or noise disturbances).
2. Accessibility for External & Vulnerable Stakeholders: Current venues target hospital patients and visitors. External stakeholders—specifically surrounding informal street vendors (*PKL*), nearby dense *kampung* residents, and non-literate community members—are largely unaware of or unable to conveniently access internal hospital complaint channels.
3. Gender-Sensitive and SEA/SH Protocol: While patient confidentiality is maintained, the existing system lacks a dedicated, confidential, female-led, survivor-centered intake channel specifically designed to handle sensitive Gender-Based Violence (GBV), Sexual

Exploitation and Abuse (SEA), and Sexual Harassment (SH) allegations against construction personnel.

4. Contractor Accountability Linkage: There is no structural integration between RSCM's Humas division and the EPC Contractor's site management to ensure immediate, field-level technical resolutions (e.g., real-time traffic or dust fixes).

10.3 Objective and Principles of the Upgraded Project Level GRM

To bridge these gaps, the Project-Level GRM upgrades RSCM's existing capacity to ensure that grievances related to E&S aspects of this AIIB-financed project are addressed in a timely, fair, and transparent manner. The project-level GRM is governed by the following core principles:

- Multiple Access Channels: Various physical, digital, and direct avenues are established to allow impacted individuals to register issues effortlessly.
- Inclusivity & Authorization: Grievance submission is available in both written and verbal forms. Complainants may submit directly or designate a trusted representative (e.g., family members or local community leaders for elderly or disabled persons).
- Public Disclosure: GRM protocols, contact points, and resolution steps will be prominently disclosed on public notice boards along construction site boundaries and outlined during public consultations.
- Structured Documentation: A dedicated, centralized Project Grievance Logbook will be maintained and updated in real-time by the PMU Social/EHS focal point.
- Proportionate Timelines:
    - Acknowledgement: Receipt of complaint acknowledged within 3 working days (updated from 5 days for greater agility).
    - Immediate Civil Fixes: Physical site hazards (e.g., blocked access, extreme dust/noise) addressed within 24–48 hours.
    - Standard Resolution: Full investigation and resolution delivered within 15 working days.
- Confidentiality, Anonymity, and Non-Retaliation: Anonymous complaints are accepted. Strict non-retaliation policies protect complainants, and personal details remain confidential.
- Zero Cost & Appeal Mechanism: Complainants incur no fees. If an issue cannot be resolved at the primary project level, an *ad-hoc* Multi-Stakeholder Appeals Committee (comprising PMU, local *Lurah*, community representatives, and independent observers) will be convened prior to any legal recourse.

10.4 GRM System Improvement Action Plan (To be Integrated into the ESMP)

The following specific enhancements will be implemented prior to site mobilization and monitored under the ESMP.

Table 46. GRM System Improvement Plan

Identified GAP	Required Action / Improvement Measure	Responsible Party	Timeline
Lack of Construction E&S Scope	Establish a joint Project-GRM Team uniting RSCM Humas, PMU EHS Officers, and Contractor EHS Leads with clear civil complaint handling protocols.	PMU / RSCM / Contractor	Prior to Site Mobilization
Limited External Accessibility	Install weatherproof physical GRM notice boards and secure complaint boxes along the outer site fence (Salemba-Diponegoro corridors), and launch a direct 24/7 WhatsApp Hotline.	Contractor / PMU	Pre-construction Phase
Absence of Dedicated SEA/SH Protocol	Designate female GRM focal points and establish a survivor-centered referral channel in partnership with local women's protection organizations/NGOs.	PMU Social Specialist	Prior to Worker Influx
Weak Field Response Linkage	Mandate the EPC Contractor to log daily field grievances in a shared C-ESMP register, with weekly audit sign-offs by the PMU Supervising Engineer.	EPC Contractor / PMU	Active Construction Phase

10.5 Project Redress Procedures

To promote openness, accountability, and prompt resolution of any issues, the project has implemented a systematic complaint handling procedure. This mechanism is intended to handle a variety of grievances, including basic hospital service complaints, internal construction-related problems, and sensitive instances like gender-based violence (GBV). The system establishes defined dates, responsible units, and complaint resolution paths, guaranteeing that all impacted persons, including hospital personnel, patients, contractors, and residents of the surrounding area, have access to a fair and private redress process.

Table 47. Complaint Handling Overview

Stage	Description	Timeframe
Acknowledgement	Complaint is acknowledged via the same channel used by the complainant.	Within 5 working days
Categorization	Complaint is sorted as: a) General hospital-related b) Project-related (Construction/Internal) c) Gender-Based Violence (GBV) / Harassment.	Upon receipt
Investigation & Response	General complaints: handled by Hospital Management.	Up to 10 working days
	Internal Construction complaints: handled by the Contractor and PIU coordination.	Up to 20 working days
	GBV/harassment: referred to the trained GBV focal point for confidential action.	Immediate action within 24 hours
Closure and Feedback	Resolution communicated back to complainant with confirmation of action taken.	As soon as resolved

10.5.1 Process and Workflow

- Complaints are registered in the Grievance Register and given a unique tracking number.
- Complaints are examined and acknowledged within 5 working days.
- The Grievance Redress Committee reviews and provides remedies within 10-20 working days. Complex matters may require more study. GBV concerns will be addressed immediately, within 24 hours.
- Resolution and response: Complainants are notified of the resolution. If the complainant is dissatisfied, they may escalate the situation to higher authorities.
- Regularly monitor and report issues to detect patterns and improve processes. Summary reports are distributed to stakeholders and regulatory bodies.

10.5.2 Redress Procedure for General Complaints

Individuals, households, or communities affected by other aspects, such as environmental impacts (e.g., dust, noise, or a lack of safety measures that increase the risk of traffic accidents to road users or local ethnic groups), can file complaints through various channels that will be established for their convenience. However, complaints involving Gender-Based Violence (GBV) Sexual

Exploitation and Abuse (SEA) and Sexual Harrasment (SH) will be handled through a dedicated, sensitive channel within the GRM to ensure specialized protection.

To protect survivors, GBV/SEA-SH complaints will follow a Survivor-Centered Approach based on three strict principles:

- Confidentiality: Case details and survivor identities will be kept strictly anonymous. Cases are handled exclusively by a trained, designated female focal point.
- No Retaliation: A strict Code of Conduct will be enforced for all staff and contractors. Intimidation or retaliation against survivors or witnesses will result in immediate termination.
- Survivor Autonomy: No investigation or action will be taken without the explicit, informed consent of the survivor.

The GRM will focus on immediate assistance rather than internal investigation. With the survivor's consent, the project will immediately refer cases to professional support networks in DKI Jakarta:

1. Medical & Psychological Care: Referral to RSCM's crisis center or specialized clinics for immediate medical treatment and mental health support.
2. Legal & Protection Services: Coordination with government agencies like *UPTD PPA DKI Jakarta* or local NGOs for legal counselling, safe shelters, and social assistance.

Step 1: Submit PIU complaints to the GRM focal point using the methods listed below.

- Call Center RSCM Pusat: 1500135
- Patient Traffic Control RSCM: 08111844119
- WhatsApp Center RSCM Kencana: 08119935135 or 082112577929
- Email address: info@rscm.co.id
- Website address: https://rscm.co.id/id/new

Alternatively, written comments can be sent off at hospital suggestion boxes or orally delivered in person to the hospital's community office or project implementation team. Grievances shall be addressed within 7 calendar days and resolved within 14 calendar days.

When a grievance is received through the designated channels above, the PIU Dedicated Focal Point will immediately conduct an initial screening and sorting process. The focal point will distinguish between general hospital complaints and AIIB-financed project activities using the following criteria:

a. General Hospital Complaints: Issues regarding daily hospital services, medical treatments, or general administration will be routed to the existing RSCM Quality & Patient Satisfaction Department.
b. AIIB Project Activities: Issues directly related to the new project development—such as construction impacts (dust, noise, safety), environmental issues, worker-community friction,

or GBV/SEA-SH cases—will be formally logged into the AIIB Project Grievance Registry for immediate action by the PIU

Step 2: PMU. If aggrieved people are dissatisfied with the settlement provided by PIU (Step 1), they may file a grievance with PMU, which oversees PIU. Grievances shall be addressed within 7 calendar days and resolved within 14 calendar days.

Step 3: Ministry of Health. If disgruntled parties are dissatisfied with the settlement provided by PMU (Step 2), they may file a grievance with the Ministry of Health, which oversees PMU. Grievances shall be addressed within 7 calendar days and resolved within 14 calendar days.

10.5.3 Redress Procedure for Complaints related to Labor and Working Conditions

These steps constitute a procedure that has been implemented and has become the standard procedure for complaints related to labor and working conditions; going forward, this procedure will continue to be followed in the same manner. Project workers can lodge their grievance/complaint as follows:

Step 1: Employer Level (contractors and subcontractors). Affected persons (APs) can file a grievance with their employer, who serves as the primary point of contact for receiving and addressing grievances. Grievances can be filed verbally or in writing, in person or via phone, text message, mail, or email (anonymous complaints are permitted). The Employer involved will handle the matter within 15 days. Once the case has been settled and the AP is satisfied, the employer will submit it to PMU for information and records. If the AP is dissatisfied with their employer's response, the Employer will send the AP to the GRM focal point of PMU and PMU if necessary and will notify the AP of the referral.

It is underlined that if a complaint is about the safety and health of one or more people, it must be handled as quickly as feasible, depending on the nature and urgency of the grievance.

Step 2: PIU level. PIU will handle the complaint raised by the Employer and acknowledge receipt of the AP's concerns within 7 days of receipt. If the PIU GRM is unable to resolve the issue, the GRM focal point will engage with the project manager for assistance. The GRM focal point will notify the AP of the PIU's resolution result in writing within 30 days of receiving the complaint. If the AP is not pleased with the resolution conclusion offered by PIU, the matter will be sent to hospital management for resolution, and the AP will be notified in writing.

If the AP is not satisfied with the above-mentioned settlement, an ad hoc multistakeholder group will be formed to handle the rejected grievance - as an alternative to the affected individual proceeding to court.

Step 3: Regional Manpower Office (Disnaker DKI Jakarta). In the event that an internal settlement cannot be reached, the aggrieved employee may file a complaint with the Regional Manpower Office (Disnaker DKI Jakarta) for further mediation.

Step 4: Industrial Relations Court. If the multistakeholder group is unable to address the dispute satisfactorily, the injured individual may seek legal action. The AP will bear the costs involved with the litigation. The decision of the Court will be final.

This GRM method must be incorporated in the tender documents for contractual project workers, revealed to them, and ensured that they understand it and can apply it when necessary.

10.5.4 Redress Procedure for Submitting Written Grievances through AIIB

AIIB established the Project-affected People's Mechanism (PPM) to allow for an independent and impartial review of submissions from project-affected people who believe they have been or will be adversely affected by AIIB's failure to implement its Environmental and Social Policy (ESP) and whose concerns cannot be satisfactorily addressed through project-level grievance redress mechanisms or AIIB management's processes.The Complaints-resolution, Evaluation, and Integrity Unit (CEIU) is in charge of running the Project-affected People's Mechanism.

PPM Submission Online Form:

https://www.aiib.org/en/about-aiib/who-we-are/project-affected-peoples-mechanism/online-form/index.html

11. Implementation for ESMP

11.1 Relevant Project Stakeholder and Responsibilities

11.1.1 Ministry of Health

The Ministry of Health is primarily responsible for ensuring that environmental and social protections are included into healthcare infrastructure projects. It is in charge of ensuring project compliance with health sector legislation, including E&S components into the planning, construction and operation phases, and collaborating with relevant ministries to resolve health-related environmental concerns. The MoH also oversees the ESMP's implementation at the hospital level and ensures that personnel are trained in E&S procedures.

11.1.2 Provincial Environmental Agency

Based on The Minister of Environment Regulation No. 22 / 2025 Annex II, Provincial Environmental Agency (DLH) is the key authority responsible for environmental preservation and sustainability for medical sector. It guarantees that the Environmental and Social Impact Assessment (ESIA) satisfies national requirements, issues environmental permits (AMDAL), and oversees compliance with environmental legislation throughout the project's life cycle. The DLH of DKI Jakarta may also give technical assistance and perform inspections to ensure that mitigating measures are properly implemented.

DLH of DKI Jakarta also are in charge of enforcing environmental laws and implementing ESMPs at the municipal and regional levels. Their responsibilities include routine monitoring, community participation, resolving disputes about environmental consequences, and facilitating collaboration between hospitals and the larger community. They are the initial point of contact for resolving localized environmental and socio-economic concerns.

11.1.3 RSUPN Dr. Cipto Mangunkusumo (RSCM) Jakarta

1. Project Implementing Unit (PIU) of RSCM
   - The lead agency oversees project management.
   - Ensures adherence to national environmental and social regulations.
   - Coordinates with regulators, contractors, and stakeholders.
   - Submits regular implementation/monitoring reports to the Ministry of Health and other appropriate authorities.
   - A specialized staff inside the PMU oversees ESMP deployment.
   - Tracks environmental and social implications throughout the project lifecycle.
   - Ensures appropriate mitigating measures are in place.
   - Performs regular environmental and social audits.

2. PIU Officers

Environmental and social officers in the PIU will be part of legal and Environmental and Social focal point working group as stipulated in Figure 32.

a. Environment Officer of the PIU

During the drafting of bidding documents and work contracts for demolition and construction contractors:

- Screen and scope environmental risks and impacts depending on the contract package.
- Ensure that the bidding document and work contract include the contractor's duties for preparing the C-ESMP and properly managing environmental risks and consequences.

Before construction begins:

- Ensure contractors (primary and subcontractors) submit site-specific C-ESMPs to PIU and its Construction Supervision Consultant.
- The contractor's site-specific ESMP should reflect the E&S risks and consequences identified in the ESIA/ESMP.
- Conducting environmental training for hospital personnel, contractors, and subcontractors.

During the construction process:

- Monitoring environmental management outcomes for primary contractors, subcontractors (where applicable), and PIU's Construction Supervision Consultant.
- Leading all stakeholder engagement efforts, including information disclosure, consultations, and reporting back to stakeholders—as per SEP (Annex in ESIA/ESMP).
- Collaborating with relevant ministries, local governments, and agencies to address environmental risks and impacts.
- Generate monthly summary reports on environmental implementation for PMU.

b. Social Officer of the PIU

During the development of a bidding document and work contract for demolition and construction contractors.

- Screen and scope social risks and impacts depending on contract package, including community safety, occupational health and safety, and GBV/SEA/SH.
- Ensure that the contractor's obligations include:
    1) Ensure that the contractor's Environmental and Social Management Plan (ESMP) and effective risk and impact management are clearly represented in bidding papers and the Work Contract.
    2) Ensure the contractor develops a labor management plan as part of their ESMP.

3) Monitoring the impact on the livelihoods of street vendors and informal laborers during construction and including mitigating measures into the contractor's social performance responsibilities.
4) Integrating gender-related concerns, such as implementing and monitoring the Gender Action Plan (GAP), into contractor and project control systems.

Before construction begins:

- Ensure contractors (primary and subcontractors) submit site-specific ESMPs (including CHMP, LMP, etc. As specified in the ESMP) to PIU and its Construction Supervision Consultant.
- The contractor's site-specific ESMP should consider the social risks and implications as well as mitigation measures identified in the ESIA/ESMP.
- Conducted social training for hospital staff, contractors, and subcontractors.

During the construction process:

- Monitoring social management processes and outcomes for major contractors, subcontractors (where applicable), and PIU's Construction Supervision Consultant.
- Led stakeholder engagement initiatives, such as information disclosure, consultations, and reporting, in accordance with SEP (Annex in ESIA/ESMP).
- Collaborating with relevant ministries, local governments, and agencies to address environmental risks and impacts.
- Generate monthly summary reports on ESMP/C-ESMP implementation on social aspects for PMU.

11.2 Project Implementation Arrangements

The implementation of the Environmental and Social Management Plan (ESMP) for the Project requires well-structured implementation arrangements for E&S management. This aims to ensure environmental and social safeguards risks and impacts are effectively integrated into project's planning/design, pre–construction, construction, and operational phases. The management and coordination of this project are carried out by the Inter-Ministerial/Agency Coordination Team, the Internal Coordination Team of the Ministry of Health, the Project Management Unit (PMU), and the Project Implementation Unit (PIU).

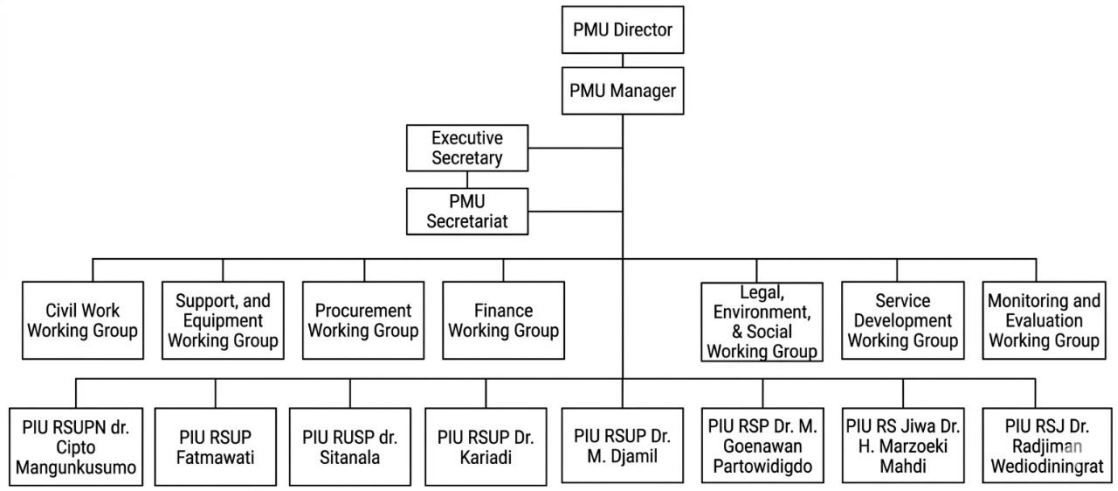


Figure 32. PMU Organization Chart

The Project Management Unit (PMU) refers to the coordination team that manages operations at the Directorate General of Advanced Health Level. The ESMP will be executed directly at the level of a Project Implementation Unit (PIU) formed by RSCM.

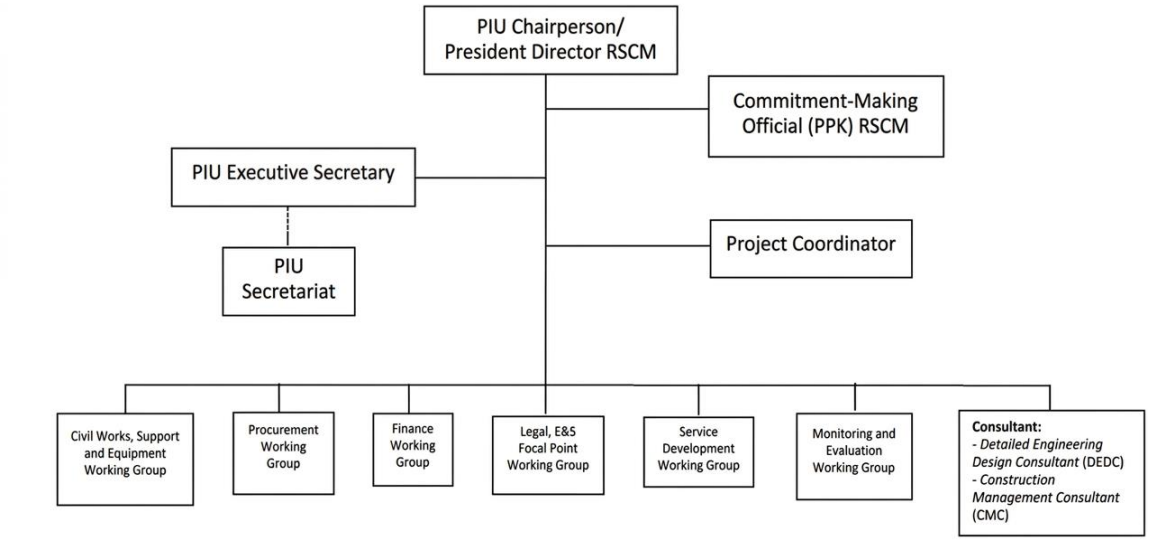


Figure 33. PIU Organization Chart RSCM

PIU is managed and supervised by the Project Management Unit of the Ministry of Health, which is led by the Project Director and Project Manager, respectively.

11.3 Capacity Building and Training

During project execution, particularly during the first six months after the project implementation commences, training will be conducted for the following stakeholders to ensure relevant project stakeholders are fully aware of the project's E&S risks and impacts and proposed mitigation measures. The PMU, particularly the E&S focal points, in coordination with AIIB will provide ESIA/ESMP training for the PIUs (especially the E&S focal points), key management personnels and other relevant stakeholders of all participating hospitals of the TRUST Project. Further, The PIU of RSCM, particularly the E&S officers will carry out capacity strengthening as follows:

- Training for hospital staff, contractors and project stakeholders on ESIA/ESMP.
- Conduct public consultation and stakeholder engagement training particularly with vulnerable groups, to ensure the hospital's construction doesn't disrupt local access or livelihoods
- Construction Occupational Health & Safety (OHS / K3) & Emergency Response Procedures Training
- Training related to other development needs, such as general hazardous waste management and specific hazardous waste management related to asbestos, as well as other health and environmental training, transportation and management training, management and vibration monitoring, gender-based violence, and public relations training
- Develop awareness programs on environmental and social sustainability

Based on the conclusions and risk assessments, the capacity-building and training action plan outlined in the table below has been developed to ensure project compliance and the competence of stakeholders throughout all project phases.

Table 48. Action Plan of Capacity Building and Training

No	Training Objective	Training Topic / Type	Organizer / Facilitator	Target Audience	Schedule / Timing	Est. Cost (IDR)
1	Ensure understanding of ESMP requirements, AIIB ESF standards, and compliance with national environmental and social regulations.	ESMP & AIIB Environmental & Social Framework (ESF) Orientation & Implementation Training	Environmental & Social Experts (ESIA Specialists) / EHS Supervision Consultant	RSCM PMU / PIU Team, Main Contractor Team, Supervision Consultant, & Hospital OHS (K3RS) Staff	Pre-Construction (Prior to Field Mobilization)	20.000.000
2	Prevent occupational accidents,	Construction Occupational Health & Safety	Certified Construction OHS Expert /	All Construction Workers, Field Supervisors,	Pre-Construction & Provided	20.000.000

No	Training Objective	Training Topic / Type	Organizer / Facilitator	Target Audience	Schedule / Timing	Est. Cost (IDR)
	ensure PPE compliance, secure safe work procedures in high-risk areas (working at heights, deep basement excavation), and emergency response handling.	(OHS / K3) & Emergency Response Procedures Training	OHS Committee (P2K3) & Main Contractor OHS Specialist	Contractor OHS Officers, & RSCM Emergency Response Team	Periodically (Monthly / Daily Toolbox Talks)	
3	Ensure proper removal, handling, sorting, transport, and disposal procedures for hazardous materials (such as asbestos/ACM and medical hazardous waste) in compliance with MoE (KLH) standards.	Hazardous Waste (B3), Asbestos (ACM), and Demolition Debris Handling & Management Training	Certified Asbestos & Hazardous Waste Handling Specialists / EHS Environmental Inspector	Demolition Team, Hazardous Waste Storage Personnel, RSCM Sanitation & Environmental Health Team, Hazardous Waste Disposal Contractor	Prior to & During Building Demolition Phase	20.000.000
4	Prevent physical damage and vibration/noise impacts on Cultural Heritage buildings (e.g., RSCM Main Building, Eijkman Building, and FKUI) during demolition & piling activities.	Cultural Heritage Protection Management & Vibration Monitoring Training (DIN 4150-3)	Cultural Heritage Experts (TACB / Jakarta Cultural Agency) & Structural/Geotechnical Engineer	Main Contractor, Heavy Equipment Operators, Demolition Team, & Field OHS/EHS Team	Prior to Demolition & Foundation Construction (Pre-Construction / Early Construction Stage)	100.000.000

No	Training Objective	Training Topic / Type	Organizer / Facilitator	Target Audience	Schedule / Timing	Est. Cost (IDR)
5	Ensure implementation of Zero Tolerance Policy on GBV, SEAH, and VAC, signing of Code of Conduct, and establishment of safe and confidential report referral mechanisms.	Gender-Based Violence (GBV), Sexual Exploitation, Abuse & Harassment (SEAH), and Violence Against Children (VAC) Prevention Training	Gender Specialist / UPT PPPA DKI Jakarta Team & PMU Social Specialist	Contractor Management, Field Workers, Security Personnel, Community & Public Relations Team of RSCM	Prior to Worker Mobilization & Conducted Bi-annually (Every Semester)	50.000.000
6	Enhance capacity to receive, categorize, investigate, and resolve grievances from the public, patients, and workers in accordance with SLA (5–20 days).	Grievance Redress Mechanism (GRM) & Public Relations Training	Communication Specialist & PMU / PIU RSCM Social Specialist	RSCM GRM Person-in-Charge (PIC) Team, RSCM PR Team, Contractor Field Team, Representatives from Kenari & Pegangsaan Sub-districts	Pre-Construction Phase (Prior to GRM Operationalization)	20.000.000
7	Guarantee smooth and safe traffic flow on Jl. Diponegoro & Jl. Kimia, manage heavy equipment mobilization, and enforce traffic management standards (ANDALALIN).	Road Traffic Safety, Access Control & Material Transport Management Training (ANDALALIN)	Jakarta Provincial Transportation Agency (Dinas Perhubungan) / EHS Consultant Expert Traffic Engineer	Traffic Controllers (Flagmen/Packers), Heavy Equipment / Logistics Truck Drivers, & Contractor Field Coordinators	Prior to the Start of Heavy Equipment & Material Logistics Mobilization	50.000.000
8	Prevent the spread of communicable	Public Health, Communicable Disease Prevention	Occupational Health / Environmental	All Contractor Workers, Canteen /	Pre-Construction &	20.000.000

No	Training Objective	Training Topic / Type	Organizer / Facilitator	Target Audience	Schedule / Timing	Est. Cost (IDR)
	diseases (resulting from labor influx), prevent water-borne diseases, and enhance workplace/barracks environmental sanitation.	& Worker Sanitation Hygiene Training	Health Team of RSCM & PMU Medical Team	Worker Barracks Managers, & Hospital OHS (K3RS) Team	Routinely Every 6 Months	

11.4 ESMP Table

Table 49. Environmental and Social Management Plan during Construction and Operation Phase

Stage / Environmental & Social Issue	Mitigation & Management Measures	Monitoring Parameters / Indicators	Monitoring Location	Monitoring Frequency	Implementing Entity	Supervising Entity
I. PRE-CONSTRUCTION STAGE						
Land Acquisition & Relocation of Informal Vendors/ Tenants (Social)	• Conduct meaningful consultations and public disclosures with affected vendors/tenants. • Provide livelihood restoration support and voluntary relocation options. • Ensure no forced evictions occur without fair and adequate compensation.	• Number of public consultation sessions conducted. • Number of registered tenants/vendors receiving assistance/relocation packages. • Level of satisfaction and grievances related to relocation.	Demolition site of old structures (Admin Building, Waste Station, RSCM Shelter House)	Prior to physical construction start (Once during preparation phase)	RSCM PIU / Land Acquisition Team	MoH PMU, AIIB, Jakarta Environmental Agency (DLH)
Cultural Heritage & Historic Building Preservation (Environmental & Social)	• Perform baseline Structural Condition Assessments on neighboring heritage structures (RSCM Main Building, Eijkman Building, FKUI). • Obtain technical permits and clearance recommendations from the Cultural Heritage Expert	• Baseline structural condition assessment report for heritage buildings. • Issuance of Restoration/Preservation Recommendation from Cultural Agency.	Heritage Buildings within the RSCM Complex & FKUI Salemba Campus	Planning & Pre-construction Phase	Design Consultant / RSCM PIU	Jakarta Cultural Agency, MoH PMU

Stage / Environmental & Social Issue	Mitigation & Management Measures	Monitoring Parameters / Indicators	Monitoring Location	Monitoring Frequency	Implementing Entity	Supervising Entity
	Team (TACB) & Jakarta Cultural Agency.					
Healthcare Service Continuity, Patient Rerouting & Sensitive Equipment Relocation	● Develop and implement a detailed Service Relocation & Patient Flow Rerouting Plan. ● Provide temporary, fully compliant, barrier-free service spaces prior to decommissioning existing wards/outpatient units. ● Execute safe calibration, packing, and transfer protocols for sensitive medical equipment (e.g., imaging, lab analyzers). ● Install vibration isolators and dust barriers near relocated care units. ● Ensure clear wayfinding signage and dedicated staff assistance for patient rerouting.	● Zero unplanned downtime/disruption for critical public health services. ● Equipment calibration and operational status reports post-relocation. ● Log of patient guidance/wayfinding inquiries and satisfaction levels. ● Incident-free transfer of patients and diagnostic equipment.	Affected inpatient/outpatient wards, diagnostic centers, temporary service relocation sites, and patient corridors.	Continuous during relocation phase; Weekly monitoring during construction	RSCM PIU / Affected Clinical Departments / IPSRS	MoH PMU, EHS Supervision Consultant, AIIB

Stage / Environmental & Social Issue	Mitigation & Management Measures	Monitoring Parameters / Indicators	Monitoring Location	Monitoring Frequency	Implementing Entity	Supervising Entity
II. CONSTRUCTION STAGE						
Air Quality & Dust Control (Environmental)	• Erect temporary dust barriers (minimum height 4 meters) around the construction site boundary. • Water unpaved areas and haul routes regularly (2–3 times/day). • Cover material/debris transport trucks with heavy-duty tarpaulins. • Implement wheel washing stations for all exiting construction vehicles. • Prohibit open burning of waste on site.	• Ambient air quality parameters: PM2.5, PM10, SO2, NO2, CO. • Compliance with Government Regulation No. 22/2021 & WHO Air Quality Guidelines. • Visual cleanliness of public access roads adjacent to the site.	4 Site boundary points (North, South, East, West) & sensitive patient/care areas	Air quality sampling every 6 months (Semi-annually); Daily visual inspection	Main Contractor	EHS Supervision Consultant, RSCM PIU, Jakarta Environmental Agency (DLH)
Noise & Structural Vibration (Environmental & Social)	• Utilize bored piling technology (non-impact piling method). • Install temporary acoustic barriers/curtains around high-noise machinery. • Schedule heavy equipment operation outside sensitive hospital care hours. • Install vibration isolators	• Noise levels (dBA) max 55 dBA (hospital zone limit). • Mechanical vibration levels (mm/s) to prevent structural damage and safeguard precision medical tools.	Site boundaries adjacent to Inpatient Wards, MRI/ Radiology Buildings, and Heritage Structures	Monthly noise and vibration monitoring; Continuous inspection during heavy machinery usage	Main Contractor	EHS Supervision Consultant, RSCM PIU

Stage / Environmental & Social Issue	Mitigation & Management Measures	Monitoring Parameters / Indicators	Monitoring Location	Monitoring Frequency	Implementing Entity	Supervising Entity
	near sensitive diagnostic equipment (Radiology, MRI, ICU) and heritage buildings.					
Wastewater & Groundwater Protection (Environmental)	• Construct sedimentation traps to capture runoff before discharge. • Provide portable toilets and sanitation facilities connected to temporary wastewater treatment systems. • Conduct periodic shallow groundwater sampling to prevent *E. coli* and heavy metal contamination.	• Wastewater parameters: pH, TSS, BOD, COD, Oil & Grease. • Groundwater quality at monitoring wells: *E. coli*, total Coliform, Nitrates.	Project drainage outlets, sedimentation basins, surrounding environmental monitoring wells	Wastewater & groundwater sampling every 6 months (Semi-annually)	Main Contractor	RSCM PIU, Jakarta Environmental Agency (DLH)
Solid Waste, Demolition Debris & Hazardous Waste/Asbestos (ACM) (Environmental)	• Implement strict Asbestos-Containing Materials (ACM) containment and safe removal protocols. • Segregate construction waste, recyclable material, and hazardous waste. • Transport demolition debris from the 9 old structures using MoEF-licensed hazardous waste	• Hazardous waste and ACM consignment notes/manifests. • Construction waste diversion/recycling rate (%). • Verification of third-party waste treatment licenses.	Old building demolition area, temporary construction hazardous waste storage	Daily inspections; Manifest logging per hazardous waste shipment	Main Contractor / Certified Asbestos Removal Specialist	EHS Supervision Consultant, RSCM PIU, MoE (KLH)

Stage / Environmental & Social Issue	Mitigation & Management Measures	Monitoring Parameters / Indicators	Monitoring Location	Monitoring Frequency	Implementing Entity	Supervising Entity
	transporters. ● Operate a licensed and properly designated temporary Hazardous Waste Storage Facility on site.					
Occupational Health and Safety (OHS) (Social & Labor)	● Provide free, standard-compliant PPE (helmets, safety boots, harnesses, masks, goggles) to all personnel. ● Conduct daily safety inductions, toolbox meetings, and Job Safety Analyses (JSA). ● Establish a Health & Safety Committee (P2K3) and register all workers with BPJS Ketenagakerjaan. ● Provide adequate sanitation, clean drinking water, and first-aid facilities.	● Workplace Incident Rates: Lost Time Injury Frequency Rate (LTIFR) & Fatality Rate. ● PPE compliance rate (%). ● BPJS Ketenagakerjaan insurance coverage rate (100%).	Entire construction work site and worker support facilities	Daily monitoring; Incident reporting within 24 hours / Monthly summaries	Main Contractor (OHS Specialists)	EHS Supervision Consultant, RSCM PIU, Jakarta Manpower Agency
Gender-Based Violence & Sexual Exploitation,	● Require all management, staff, and construction workers to sign a binding Code of Conduct.	● Percentage of personnel signed Code of Conduct (100%). ● Number of GBV/SEAH	Construction area, worker accommodation/mess, and	Monthly monitoring; 24-hour response	Main Contractor /	RSCM PIU, MoH PMU, AIIB Social Specialist

Stage / Environmental & Social Issue	Mitigation & Management Measures	Monitoring Parameters / Indicators	Monitoring Location	Monitoring Frequency	Implementing Entity	Supervising Entity
Abuse, and Harassment (GBV / SEAH) (Social)	• Conduct regular training and awareness sessions on GBV/SEAH prevention. • Establish a confidential, accessible, and survivor-centric grievance channel (GBV-sensitive GRM).	training sessions conducted. • Number of reported GBV/SEAH grievances and resolution status.	surrounding community interfaces	window for reported GBV/SEAH incidents	PIU Gender Team	
Traffic Management & Community Access (Social & Safety)	• Implement the approved Traffic Impact Assessment (ANDALALIN) plan and Internal Traffic & Parking Management Plan (ITPMP). • Deploy trained flagmen at site access gates and intersections. • Schedule heavy vehicle movements strictly during off-peak and nighttime hours. • Maintain an unobstructed 24/7 priority route for emergency ambulances. • Monitor and observe speed limits	• Traffic flow fluidity along Diponegoro and Salemba Raya roads. • Number of traffic incidents or near-misses related to project vehicles. • Presence and condition of temporary traffic signage and safety barriers.	Site entrance/exit gates, Jl. Pangeran Diponegoro, Jl. Salemba Raya, emergency medical corridors	Daily monitoring during peak material hauling hours	Main Contractor (Traffic Team)	Jakarta Transportation Agency (Dishub), RSCM PIU

Stage / Environmental & Social Issue	Mitigation & Management Measures	Monitoring Parameters / Indicators	Monitoring Location	Monitoring Frequency	Implementing Entity	Supervising Entity
Grievance Redress Mechanism (GRM) (Social)	• Operate a dual-track Grievance Redress Mechanism (Internal for Workers, External for Public). • Maintain physical complaint boxes, a dedicated WhatsApp hotline, and public project information boards. • Record and resolve complaints within the designated timeframe (maximum 14 working days).	• Master grievance logbook up-to-date status. • Percentage of grievances resolved within target timeframe (target >95%). • Average grievance resolution turnaround time.	RSCM GRM Secretariat, site notice boards, online reporting portals	Daily grievance recording; Monthly evaluation and reporting	RSCM PIU GRM Team & Main Contractor	MoH PMU, AIIB
Healthcare Service Continuity, Patient Rerouting & Sensitive Equipment Relocation	• Develop and implement a detailed Service Relocation & Patient Flow Rerouting Plan. • Provide temporary, fully compliant, barrier-free service spaces prior to decommissioning existing wards/outpatient units. • Execute safe calibration, packing, and transfer protocols for sensitive	• Zero unplanned downtime/disruption for critical public health services. • Equipment calibration and operational status reports post-relocation. • Log of patient guidance/wayfinding inquiries and satisfaction levels. • Incident-free transfer of	Affected inpatient/outpatient wards, diagnostic centers, temporary service relocation sites, and patient corridors.	Continuous during relocation phase; Weekly monitoring during construction	RSCM PIU / Affected Clinical Departments / IPSRS	MoH PMU, EHS Supervision Consultant, AIIB

Stage / Environmental & Social Issue	Mitigation & Management Measures	Monitoring Parameters / Indicators	Monitoring Location	Monitoring Frequency	Implementing Entity	Supervising Entity
	medical equipment (e.g., imaging, lab analyzers). ● Install vibration isolators and dust barriers near relocated care units. ● Ensure clear wayfinding signage and dedicated staff assistance for patient rerouting.	patients and diagnostic equipment.				
III. OPERATIONAL STAGE						
Clinical Wastewater & Integrated WWTP Management (Environmental)	● Operate the upgraded Wastewater Treatment Plant (WWTP) using Extended Aeration / MBBR technology. ● Perform routine instrument maintenance and maintain adequate chemical treatment/disinfection supplies. ● Conduct periodic accredited laboratory analysis for healthcare effluent parameters.	● Wastewater effluent standards: pH, BOD, COD, TSS, Oil & Grease, Ammonia, Phosphate, total Coliform (per MoEF Reg No. 68/2016). ● Operational status of SPARING (Continuous Online Wastewater Monitoring System).	WWTP Inlet and Outlet at RSCM Integrated Campus	Continuous online monitoring via SPARING; Monthly accredited third-party lab testing	RSCM Environmental Health Unit (Kesling)	Jakarta Environmental Agency (DLH), MoE (KLH), Ministry of Health

Stage / Environmental & Social Issue	Mitigation & Management Measures	Monitoring Parameters / Indicators	Monitoring Location	Monitoring Frequency	Implementing Entity	Supervising Entity
Operational Medical & Hazardous Waste Management (Environmental & Hospital Safety)	• Enforce source segregation of waste (Infectious, Cytotoxic, Radioactive, Sharps, Pharmaceutical, General Non-B3). • Operate the licensed Waste Distribution Station (WDS) and Integrated Hazardous Waste Storage Facility. • Outsource transport, treatment, and disposal to MoEF-licensed third-party hazardous waste management firms.	• Medical waste generation volume (kg/day). • Electronic hazardous waste tracking manifests (FESTRONIK). • In-ward waste segregation compliance rate (%).	WDS, Hazardous Waste Storage, all inpatient wards, and laboratories	Daily generation logs; Manifest verification per transport batch	RSCM Environmental Health Unit & Licensed Waste Contractor	Jakarta Environmental Agency (DLH), MoE (KLH)
Climate Resilience, Green Building & Disaster Risk Management (Environmental & Safety)	• Maintain Green Building Certification (BGH) performance standards. • Operate high-efficiency HVAC systems, LED lighting, and Rainwater Harvesting Systems. • Maintain raised ground floor elevations (+0.50m above street level) to mitigate Ciliwung River flood risks. • Maintain active fire	• Specific energy consumption index (kWh/m²/year). • Water efficiency index and harvested rainwater volume. • Green Building Certificate validity from Jakarta Provincial Government.	All new TRUST RSCM facility buildings	Annual Green Building Audit; Bi-annual emergency system drills	RSCM Facilities & Hospital Safety (K3RS) Team	Jakarta Spatial Planning Agency, MoH PMU

Stage / Environmental & Social Issue	Mitigation & Management Measures	Monitoring Parameters / Indicators	Monitoring Location	Monitoring Frequency	Implementing Entity	Supervising Entity
	protection and emergency response disaster management systems.					
Patient, Visitor & Staff Safety (K3RS) (Social)	• Fully enforce Hospital Occupational Health and Safety (K3RS) per MoH Reg No. 66/2016. • Ensure universal accessibility across all public areas (ramps, tactile paving, accessible restrooms). • Conduct periodic disaster and fire evacuation drills for hospital personnel and occupants.	• Facility-related Adverse Event rate. • Operational readiness of fire suppression systems (extinguishers, hydrants, sprinklers). • Hospital Accreditation Status (KARS / International standard).	All public and clinical service areas within RSCM	Monthly safety walk-throughs; Annual campus-wide evacuation drill	RSCM K3RS Committee & Facilities Team	Ministry of Health RI, Hospital Accreditation Body

12. Monitoring and Evaluation

During project execution, the PIUs of the RSCM hospitals will be in charge of monitoring the ESMP implementation. The project is categorized as B, and E&S risks and impacts are managed through consistent arrangements from PIU and Contractor level.

The ESMP reports will include information regarding the progress and outcomes of ESMP implementation, as detailed in the E&S monitoring program listed in the table below.

Table 50. Environmental monitoring plan during construction and operation phase

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities	Cost Estimate (IDR)
During construction phase						
Air quality	Continuous visual inspection regarding airborne dust concentrations.	Kimia Street : -6.197402377851464, 106.84424223300037 RSCM : -6.196019053874862, 106.84635759607272 Parking area near Diponegoro Street : -6.197260196182504, 106.84769906140944 Diponegoro Street : -6.196486988521427, 106.84836863735752	Field site inspections, visual observations, and/or other appropriate monitoring techniques.	Daily	Construction Supervision Consultant PMU E&S Focal Point Contractors	10.000.000

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities	Cost Estimate (IDR)
	Monitoring of Asbestos	Construction site area	Develop a comprehensive Asbestos Management Plan (AMP) that maps out all ACM locations and assesses their physical state (e.g., identifying friable materials at risk of releasing airborne fibers). The AMP must outline routine inspection protocols, define safe access procedures to prevent accidental damage, and mandate exposure-prevention training for at-risk personnel. This document must be readily accessible to all operations and maintenance staff. Furthermore,			50.000.000

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities	Cost Estimate (IDR)
			any remediation, extraction, or disposal of structural ACM must be executed exclusively by certified specialists in compliance with local national legislation or established international standards.			

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities	Cost Estimate (IDR)
	Conduct Air quality test (NO2, SO2, CO2, HC, PM) in accordance with the Law No. 32/2009 on Environmental Protection and Management, Government Regulation No. 41/ 1999 on Air Pollution Control, and its relevant subordinate ministerial regulations and decrees	Kimia Street : -6.197402377851464, 106.84424223300037 RSCM : -6.196019053874862, 106.84635759607272 Parking area near Diponegoro Street : -6.197260196182504, 106.84769906140944 Diponegoro Street : -6.196486988521427, 106.84836863735752	Air quality monitoring equipment	Every 3 months		10.000.000
	Use air quality monitors and employee feedback	RSCM Hospital, focusing specifically on highly sensitive environments such as Laboratories and the Intensive Care Unit (ICU).	Air quality monitoring equipment	Daily	Construction Supervision Consultant PMU E&S Focal Point RSCM Hospital	10.000.000

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities	Cost Estimate (IDR)
Noise and vibration	Evaluate decibel outputs against baseline data, ensuring alignment with the Decree of the Minister of Environment No. 48/1996 and No. 49/1996. Adhere to vibration limits defined by the Decree of the Minister of Environment No. 51/1996. Gather routine commentary from onsite healthcare personnel and patients regarding machinery and logistics noise.	Construction site Nearby sensitive structures Noise: S 6°11'06.9" E 106°47'51.3" Noise: S 6°11'01.2" E 106°48'00.4" Vibration 1: S -6,196907° E 106,846883° Vibration 2: S -6,197488° E 106,84654° Vibration 3: S -6,197136° E 106,846121° Vibration 4: S -6,196788° E 106,84477°	Routine site inspections and field visual observations.	- Noise: Daily. - Vibration: At least once every 3 months (Quarterly).	Construction Supervision Consultant PMU E&S Focal Point Contractors	10.000.000

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities	Cost Estimate (IDR)
Water Quality	Evaluate wastewater conditions (labor camp effluent via visual assessments). Perform on-site measurements as required. Conduct laboratory testing for: Total & fecal coliforms, total nitrogen, total phosphorus, COD, and BOD.	Septic tank discharge point	Water quality monitoring equipment	Weekly	Construction Supervision Consultant PMU E&S Contractors	10.000.000
Waste Management (general waste and hazardous waste)	Correct utilization of trash receptacles, waste segregation, and authorized disposal methods.	Construction site	Routine on-site inspections and visual inspections	Daily	Construction Supervision Consultant and Contractors.	10.000.000
Drainage, Soil Erosion and Sediment transport	Operational integrity of drains, maintenance needs for drainage systems, and erosion mitigation.		Visual inspection	Weekly	Construction Supervision Consultant Contractors	10.000.000
Workers' camp management	General housekeeping, OHS, ESHS	Workers' camp	Visual inspection	Weekly	Construction Supervision Consultant Contractors	10.000.000

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities	Cost Estimate (IDR)
Execution of Contractor-ESMP	Adherence to all environmental, health, and safety protocols outlined in the Annex.	Active work zones, labor camps, neighboring communities, and related areas	Visual inspection	Monthly Quarterly	Construction Supervision Consultant PMU E&S Focal Point Contractors	10.000.000
During operational phase						
Safety in hospital	Hospital management's obligation to maintain safe, functional project-supplied facilities and assets.	In RSCM	Site inspection	Weekly	Respective Hospital Management	10.000.000
Waste management (general waste and hazardous waste)	Compliance with prevailing domestic legislation, specifically regarding medical waste, which is projected to double at RSCM	Construction site	Site inspection	Weekly	Construction Supervision Consultant Contractors	10.000.000
Nosocomial Infections	There is a possibility of cross-contamination affecting healthcare workers or patients during hospitalization, particularly within	Hospital	Site inspection Visual Observation	Upon occurrence	Respective Hospitals	10.000.000

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities	Cost Estimate (IDR)
	approximately ±72 hours of adm					

Table 51. Social monitoring plan during construction and operation phase

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities
During construction phase					
Labor Influx	Formulation of a comprehensive Labor Management Plan by the Primary Contractor.	Contractors' office Construction zone	Drafting and submission of the Labor Management Plan to the PIU for endorsement (integrated into the Contractor's ESMP). Monthly projections of workforce mobilization (categorized by managerial, skilled, and unskilled personnel). Monthly tracking of projected vs. actual workforce distribution (disaggregated by gender and residency status: local vs. migrant).	Prior to the commencement of construction works; updated dynamically subject to PIU review	Contractors (including main contractors and subcontractors) PIU E&S Focal Point
	Engagement and hiring of local workforce.	Construction sites	Monthly tracking of the total local workforce engaged, with data disaggregated by gender and temporary relocation status, integrated into the report.	Monthly and during project life	Contractors PMU E&S Focal Point

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities
	Ensuring non-discriminatory treatment regarding pay and the operational work environment.	Construction sites	Total female personnel deployed on-site per month. Share of locally hired female personnel mobilized monthly.	Monthly and during project life	Contractors PIU E&S Focal Point
Sexual Exploitation, Abuse & Harassment (SEA/SH)	Conduct mandatory SEA/SH orientation and sensitization training (utilizing a baseline Code of Conduct) for all management and labor forces prior to site deployment. Educate all personnel on SEA/SH hazards, disciplinary sanctions, and the project's specific grievance redress mechanisms (GRM). Obligate all project staff (field and administrative) to thoroughly review and execute the	Construction sites and Relevant local communities	Volume and proportion of personnel trained on SEA/SH protocols prior to deployment. Volume and proportion of personnel who signed the CoC upon contract execution. Percentage of registered SEA/SH violations, along with the resolution rate of cases forwarded to the PMU. Official registration of the ESHS and grievance focal points' contact details within the Contractor's ESMP.	Monthly and throughout the project lifecycle; immediate escalation to the PMU within 24 hours if an incident occurs	Contractors PMU E&S Focal Point

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities
	Workers' Code of Conduct (CoC) as a binding part of their employment contract. Mandate contractors to designate a dedicated focal point responsible for ESHS, grievance intake, and case resolution. Enforce all mitigation protocols concerning labor camp supervision.				

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities
Social Conflicts	Any misconduct or behavior by contractor personnel or local inhabitants that precipitates communal friction (e.g., SEA/SH, disruptive construction practices, environmental pollution, blocked access routes, localized revenue loss, or public incidents).	Construction sites Relevant local communities	Frequency, typology, and magnitude of emerging social frictions. Volume of disputes successfully mitigated by contractors within a 7-day window. Volume of disputes arbitrated by local authorities Frequency of severe grievances documented and escalated to the PMU within 24 hours.	Daily Monthly	Contractors PMU E&S Focal Point

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities
Community Health and Safety	Baseline epidemiological trends in the project vicinity and surrounding areas, Overall physical wellness of the workforce, Incidences of infectious diseases among the labor force and nearby populations, Infrastructure hazards leading to vehicular or site-specific accidents, Severe casualties, epidemiological outbreaks, or acute environmental contamination.	Active building zones, Labor camps / Staff quarters, Adjacent local communities	Periodic site walkthroughs and uninterrupted site monitoring, which are complemented by direct labor consultations and continuous inter-agency coordination with local healthcare engagement units.	Daily Monthly Within 24 hours for	Contractors PMU E&S Focal Point
Child Labor/ Forced Labor	Deployment of underage or coerced labor within the primary contractor or subcontractor supply chain. Incidences of child or forced labor among	Active building zones Primary vendor facilities / worksites	Site inspection Observation	Daily Screening prior to the onboarding or deployment of any workforce member	Contractors PMU E&S Focal Point

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities
	primary tier suppliers				
Equity in Healthcare Access & Service	Hospital managements' obligation to guarantee non-discriminatory and fair treatment in medical services, ensuring full inclusion of vulnerable or marginalized groups (including low-income individuals, women, minors under 18, and people living with disabilities).	In respective hospital	Evaluation of patient admission records and service utilization trends, disaggregated by gender, age, and disability metrics	Semi-annually via internal hospital operational reports	Respective Hospital & PMU Social Development Officer
Physical Barriers in Hospital Access for Vulnerable Demographics	Continuous oversight of infrastructural accessibility tailored for disadvantaged groups, specifically individuals with disabilities, senior citizens, expectant mothers, and children.	In respective hospital	Comprehensive physical accessibility audits and structured user-satisfaction surveys.	Annually, and post-renovation or upgrade.	Respective Hospitals & PMU Social Officer

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities
Structural Damage and Vibration	Peak Particle Velocity (PPV) adhering to DIN 4150-3 limits (Max 3 mm/s for 1-10 Hz), structural crack widening and facade integrity	Critical points on the facades and foundations of heritage buildings, Core Zone (0-15 m), and Buffer Zone (15-50 m).	Realtime data from installed seismographs, baseline crack mapping and installed crack gauges.	Continuous (real-time) during piling, demolition, and heavy equipment operation.	Principal Contractor, HSE Officer, and Conservation Architect
Subsurface Archaeological Disturbance	Presence of unmapped archaeological remains, artifacts, or old foundations.	Deep basement excavation sites, foundation trenches, and general earthwork areas.	Visual observation during earthworks, immediate documentation within 24 hours if Chance Find Procedures are triggered.	Daily during excavation and earthwork activities.	Principal Contractor, HSE Officer, Archaeologist, PMU
Surface Deterioration and Physical Impact	Dust generation, air quality, and potential physical damage from construction traffic.	Buffer Zone (15-50 m) and areas adjacent to high-risk demolitions.	Routine visual inspections of protective geotextile dust covers and hoarding, tracking heavy vehicle routing to ensure no traffic breaches the Core Zone.	Daily during construction and demolition.	Principal Contractor, HSE Officer

Key risks & impacts	Monitoring parameters	Locations	Measurements	Frequency	Responsibilities
During operational phase					
Delayed Structural Settlement	Unintended structural shifts or new facade cracking after heavy machinery is removed.	Cultural heritage buildings	Structural inspections, crack comparison analysis, and photographic verification of facade conditions.	Continuous monitoring for a mandatory 3-month post-construction period.	PMU, Conservation Architect, and Structural Engineer

13. ESMP Reporting

The Environmental and Social Management Plan (ESMP) is the main tool for managing and mitigating impacts during the construction of the RSCM four buildings' development. The ESMP reporting will follow a structured arrangement to ensure transparency, accountability, and timely corrective action. Contractors are required to submit monthly ESMP compliance reports to the Project Implementation Unit (PIU), detailing mitigation actions, monitoring results, incidents, grievances, and corrective measures undertaken on-site.

The PIU will compile and consolidate this information into a monthly and quarterly environmental and social performance report. This consolidated report will be submitted by the PIU to the PMU Ministry of Health (MoH) as the executing agency, as well as to the Asian Infrastructure Investment Bank (AIIB) as the project financier. Where applicable, relevant sections will also be shared with other government oversight bodies in line with national regulations. The purpose of this reporting chain is to ensure transparency, accountability, and timely follow-up are continuously monitored and improved throughout the project lifecycle.

The ESMP monitoring and management action plan also refers to technical approval from the Ministry of Environment related to the timeline and schedule during the construction.

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Appendices

Annex 1 - Climate Risk Analysis & Mitigation

Overview

This sub-section presents the results of an initial physical climate risk screening for RSCM projects. The screening serves as a foundation for assessing, managing, and reporting physical climate risks.

Below are key insights on the most critical aspects of physical climate risks and adaptation measures relevant to the hospital.

Table 52. Climate Risk Key Insight

		Earthquake & Local Soil Conditions	Drought & Water Scarcity	Heat Wave / Extreme Temperature
Current Exposure (Baseline Hazards)		HIGH MMI VIII- | PGA 0.325g	MODERATE Low-Medium Aridity Zone	MODERATE Urban Heat Baseline
Future Exposure Change IPCC Scenarios (SSP2-4.5 | SSP5-8.5)	Year 2050	*Stable (-)*	↗ +3.50 | ↗ +5.60 Increasing drought aridity index	↑ +9.40 | ↑ +9.80 Sharp surge in hot days frequency
	Year 2080	*Stable (-)*	↗ +6.40 | ↑ +9.00 Severe water deficit under SSP5-8.5	↑ +9.80 | ↑ +9.90 Constant climate risk year-round
Facility Sensitivity (Sensitivity Level)		MEDIUM-HIGH Structural vulnerability of legacy blocks	HIGH Critical reliance on continuous clean water supply	MEDIUM-HIGH Vulnerable patient base & massive cooling loads
Future Combined Risk (Exposure x Sensitivity)	Year 2050	HIGH | HIGH	SIGNIFICANT | EXTREME	EXTREME | EXTREME
	Year 2080	HIGH | HIGH	HIGH | EXTREME	EXTREME | EXTREME
Adaptation Measures & Mitigation Plan		• Conduct routine structural audits and evaluate requirements for **seismic retrofitting** across legacy hospital buildings and critical non-structural elements.	• Construct on-site resilient water storage solutions (Grounded Water Tanks & secondary Water Treatment Plants) to safeguard critical clinical operations.	• Ensure highest-vulnerability wards (ICU, NICU, Pediatric, and Geriatric blocks) are backed by redundant power and smart adaptive HVAC systems.

	Earthquake & Local Soil Conditions	Drought & Water Scarcity	Heat Wave / Extreme Temperature
	• Implement heavy equipment anchoring, clear vibration gaps, and flexible couplings for life-support systems and advanced medical machinery. • Update and conduct mock simulations of the *Earthquake Emergency Response and Evacuation Plan* for staff and intensive care units.	• Maximize localized **water recycling** systems for non-clinical usage (laundry facilities, landscaping, and chiller plant cooling loops). • Diversify water utility supply pathways and integrate real-time automated monitoring of water consumption metrics.	• Establish dedicated climate recovery rooms (Cooling Centers) for medical professionals and active shift workers to alleviate physical thermal stress. • Integrate specific operational safety protocols considering labor productivity degradation under high indoor/outdoor **heat stress**.

** Scenario Disclaimer: Data merges Swiss Re CatNet® baseline hazard assessments with multi-scenario IPCC future climate models (SSP2-4.5 Intermediate Emission Scenario | SSP5-8.5 High-Emission Business-as-Usual Scenario).*

This sub-section summarizes the results of the initial physical climate risk screening for RSUPN Dr. Cipto Mangunkusumo (RSCM) in Senen, Jakarta Pusat, Indonesia (coordinates: -6.1974, 106.848)..

The screening was carried out using Swiss Re's proprietary natural catastrophe models, Risk Data and Service tools (CatNet®), and IPCC climate change projections for multiple future time horizons across different Shared Socioeconomic Pathways (SSP scenarios), including SSP1-2.6, SSP2-4.5, SSP3-7.0, and SSP5-8.5.

The primary goal of this screening is to detect possible material physical climatic hazards to RSUPN Dr. Cipto Mangunkusumo, hence assuring long-term operational resilience and structural safety.

- The first part describes the methodology, models, and data sources utilized for screening, as well as precise localized geographic facts about the hospital and baseline environmental conditions.
- The second segment conducts an initial evaluation of current natural and physical climatic threats to determine probable baseline exposures. For RSCM, this emphasizes immediate extreme risks such as lightning (with an extreme frequency of 209.48 lightning days per year) and severe earthquake hazards exacerbated by local soil conditions (PGA of 0.325g, MMI VIII-), while also noting that the facility is currently located outside active pluvial and fluvial flood zones.
- The third section examines how climate-related risks will evolve as a result of climate change over time, up to the year 2085, using Future Exposure Change (FEC) indicators. The FEC compares changing hazard exposure under various climate change scenarios with historical baselines. Future hazard exposure is projected using current baseline exposure levels and FEC trends. When combined with the hospital's unique operational and infrastructural sensitivity, an overall physical climate risk profile is calculated. For RSCM, this indicates an impending shift toward extreme heat wave risks as early as 2030-2040 (risk scores peaking at 9.80-9.90 out of 10) and growing drought risks (scores up to 9.00).

- Primary hazards—defined as the most critical threats in terms of sensitivity, operational vulnerability, and potential financial impact (specifically earthquakes, lightning, heat waves, and droughts)—are provided with targeted structural and operational adaptation measures to ensure critical healthcare delivery.

Sensitivity Assessment

RSCM is particularly sensitive to natural hazards, which can cause serious damage to infrastructure and critical equipment. The key risks identified for these hospitals include:

Table 53. Estimated Sensitivity Level

Hazard Type	Actual Hazard Level	Projected Hazard Level	Facility Sensitivity Level	Potential Material Impact on Hospital Operations
Lightning	Extreme (>150) Records 209.48 detected lightning days per year.	Extreme (>150)	Medium to High	Damage to sensitive medical equipment circuits , risk of primary or backup electrical system failures (*blackouts*) , disruption of IT networks/electronic health records, and localized fire risks.
Earthquake (Local Soil)	High MMI VIII- scale with a Peak Ground Acceleration (PGA) of 0.325 g due to local soil amplification.		Medium to High	Structural damage to legacy building blocks , underground medical gas or water pipe leakages , wall cracking, and malfunction of heavy life-support equipment.
Heat Wave	Moderate *(Baseline)*	Extreme *(Future 2040-2085)* Risk scores surge to 9.80 - 9.90 across almost all climate scenarios.	Medium to High	Drastic surge in air conditioning (HVAC) electrical load and cooling costs , elevated clinical risks and thermal stress for highly vulnerable patients (ICU, elderly, neonates) , and reduced labor productivity.

Hazard Type	Actual Hazard Level	Projected Hazard Level	Facility Sensitivity Level	Potential Material Impact on Hospital Operations
Drought	Moderate *(Baseline)*	Extreme *(Future)* Reaches an *extreme* level (scores 8.00) as early as 2035 under high-emission scenarios.	High	Critical shortage of clean water supply needed for surgical room operations, medical tool sterilization, hemodialysis (dialysis), sanitization, and cooling chiller plants.
Wildfire	Negligible *(Baseline)*	Extreme *(Future 2060-2085)* Increases due to urban climate anomalies, reaching scores up to 9.50.	Low to Medium	Ambient air quality degradation from heavy smoke (*haze*), exacerbating conditions for respiratory patients, and minor risk of fire spreading to outdoor vegetation.
Storm Surge (Sea Level Rise)	Negligible *(Baseline)*	Extreme *(Distant Future 2085)* Scores jump sharply to 8.60 - 9.40 under unmitigated emission pathways.	Medium to High	Indirect logistical vulnerabilities, including severe paralysis of coastal-to-urban transport routes leading to the hospital and disruption of external medical supply chains.
Fluvial & Pluvial Flooding	Medium to High.	Medium to High	High	Though safely located outside macro flood pathways , facility sensitivity remains high to localized urban water ponding from blocked internal drainage, which could obstruct ambulance accessibility.
Windstorm	Very Low Peak wind gust speeds remain low,		Medium	Minor secondary risks such as damage to high-rise glass facades, collapse of external signage, or

Hazard Type	Actual Hazard Level	Projected Hazard Level	Facility Sensitivity Level	Potential Material Impact on Hospital Operations
	stabilized at around 19.00 m/s.			fallen trees blocking parking spaces and entrance points.
Landslide	Very Low Flat topography across the metropolitan project footprint.		Low	Minimal to no direct impact on the asset boundary due to the level terrain of the Senen area in Central Jakarta.

Source: Swiss Re Report RSCM, 2026, and inarisk, 2026

Current Exposure

1. Lightning danger is classed as Extreme, indicating the most serious immediate meteorological hazard to the site. Because of Java's tropical, high-convective environment, the hospital's precise location has an unusually high frequency of 209.48 lightning days per year. This excessive degree of exposure poses serious dangers to local infrastructure, suggesting a very high risk of electrical grid overvoltages, damage to very sensitive life-support medical equipment, and probable structural fires if lightning protection measures are not properly strengthened.
2. Earthquake (Local Soil Conditions): The earthquake risk under local soil conditions is classified as high. The baseline peak ground acceleration (PGA) at the asset site is calculated as 0.325 g, equating to a Modified Mercalli Intensity scale of MMI VIII-, due to Java's high tectonic activity along active fault networks in the Pacific Ring of Fire. This high rating implies that the soft local sedimentary soil structure considerably amplifies seismic wave vibrations, increasing the likelihood of structural damage to older facility blocks, equipment displacement, and medical gas pipeline ruptures during a big seismic event.
3. Earthquake (Bedrock Conditions): The earthquake risk based only on bedrock conditions is classed as Significant. Without accounting for localized surface soil amplification, the baseline bedrock peak ground acceleration (PGA) is assessed at 0.23 gr, resulting in an MMI VII intensity. This demonstrates that the greater geographic region is in a very active seismic zone, necessitating adequate foundation anchoring for any big facility constructions.
4. Fluvial and Pluvial Flooding: Fluvial (river) and pluvial (heavy rainfall) flood threats are considered minimal due to the hospital property's present mapping. Outside of Swiss Re's active flood return period risk zones. While the site benefits from being located outside of immediate macro-flood pathways, the hospital's absolute sensitivity to flooding remains high due to the risks of regional business disruption, surrounding road blockages, and potential urban drainage overflows during extreme monsoon downpours common in Central Jakarta.

5. Windstorm risk is classed as Very Low, with baseline historical data showing that peak wind gust velocities are often less than 19.00 m/s. Severe destructive wind forces are uncommon in this inland urban area, limiting potential exposure to minor secondary threats such transient debris movement or limited damage to outdoor signs and glass facades during severe localized convective squalls.
6. Wildfire: Wildfire risk is classified as Negligible, with a minimum susceptibility value of 1.00 under historical baseline circumstances. Given the highly built-up metropolitan environment around the hospital, large-scale forest or vegetation wildfires pose little hazard; nonetheless, significant heat anomalies in future climatic horizons may necessitate better monitoring of urban heat-island fire vulnerability.

Table 54. Overview of Hazards and Associated Exposure Level

Hazards	Hazard Risk	Return Period
Fluvial Flood(SR)		Outside
Pluvial Flood(SR)		Outside
Earthquake - Bedrock Conditions		Significant(0.161-0.29)
Earthquake - Local Soil Conditions		High(0.291-0.400)
Windstorm		Very Low(<20m/s)
Landslide		Very Low
Lightning		Extreme (>150)
Wildfire		Negligible

Source: Swiss Re Report RSCM

Future Exposure Change

Future Exposure Changes (FEC) quantify the projected shifts in a facility's susceptibility to climate anomalies relative to the historical baseline era. These fluctuations are evaluated on a standardized 0-to-10 scoring index, where a value of 0 denotes a stable or declining hazard pattern, while a score of 10 represents a substantial escalation in climate exposure. By integrating existing baseline exposure metrics with these forward-looking variations, the overall Future Exposure is established. This combined metric is classified into six sequential tiers: *Very Low, Low, Moderate, High, Very High, and Extreme*. Conversely, an exposure status labeled as "none" indicates that the specific asset location faces a negligible probability of being affected by that particular threat.



Figure 34. Future Exposure Schematic

Table 55. Future Exposure Key Insights

Hazard Type	Current Baseline Exposure	Projected Future Exposure Level (2030 – 2085)	Notes & Regional Climate Trends (Based on Swiss Re Data)
Heatwaves	Moderate	Extreme *(All Scenarios from 2040 onwards)*	Climate models project a severe surge in urban heatwaves. Risk scores jump to 9.20–9.80 by 2040, peaking at 9.90 / 10 under high-emission pathways (SSP3-7.0 & SSP5-8.5).
Drought	Moderate	Significant to Extreme *(Scenario-Dependent by 2050)*	Driven by a declining Aridity Index ($AI = P/PET$). It reaches Extreme levels by 2035 under SSP3-7.0 (score 8.00) and by 2050 under SSP5-8.5 (score 8.10).
Wildfire	Negligible	Significant to Extreme *(Long-term 2060+)*	Sharp increase in days with a high Fire Weather Index (FWI > 21.3) due to temperature anomalies. Escalates to Extreme (scores 9.00–9.50) by 2085 under high-emission scenarios.
Storm Surge *(Sea Level Rise)*	Negligible	Negligible *(2030-2070)* $\rightarrow$ Extreme *(2085)*	Stays low until 2070. However, global sea-level rise models project a sharp tipping point by 2085, spiking risk scores to Extreme (8.60 for SSP3-7.0 and 9.40 for SSP5-8.5).
Human Heat Stress	Not Evaluated	Negligible *(All scenarios)* $\rightarrow$ Moderate *(SSP5-8.5 by 2085)*	Days where the maximum shaded wet-bulb globe temperature (T_{wbg}) exceeds 32°C

Hazard Type	Current Baseline Exposure	Projected Future Exposure Level (2030 – 2085)	Notes & Regional Climate Trends (Based on Swiss Re Data)
			remain safe for most timelines. Shifting to Moderate (score 4.60) only by late 2085 under SSP5-8.5.
Fluvial & Pluvial Flooding	Outside Zones	Remains Outside / Low Risk *(All Scenarios)*	Based on peak river discharge and 1-day extreme precipitation modeling (99th percentile), the core hospital site remains safely outside active flood zones.

Source: Swiss Re Report RSCM, 2026

Table 56. Future Exposure Changes

		2030	2035	2040	2045	2050	2055	2060	2070	2085
Drought Score	SSP1-2.6	1.10	2.10	3.40	5.30	7.10	7.00	7.20	7.60	5.60
	SSP2-4.5	3.50	4.50	4.20	5.80	5.60	6.30	6.40	6.20	6.40
	SSP3-7.0	7.40	8.00	8.60	8.50	8.30	8.20	8.20	8.60	8.80
	SSP5-8.5	3.90	5.50	6.50	7.40	8.10	8.40	8.60	9.10	9.00
Heat Wave Score	SSP1-2.6	6.90	7.50	8.10	8.40	8.70	8.90	9.00	9.10	9.10
	SSP2-4.5	6.80	7.60	8.50	9.00	9.40	9.50	9.70	9.80	9.80
	SSP3-7.0	7.00	7.90	8.70	9.30	9.60	9.80	9.80	9.90	9.90
	SSP5-8.5	7.50	8.50	9.20	9.60	9.80	9.80	9.80	9.90	9.90
Heat Stress	SSP1-2.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SSP2-4.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SSP3-7.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SSP5-8.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.60
Wildfire	SSP1-2.6	3.50	5.00	5.60	6.20	6.50	6.50	6.60	6.30	6.10
	SSP2-4.5	2.80	4.30	4.50	5.40	5.60	6.50	6.50	7.30	7.90
	SSP3-7.0	5.40	6.10	7.10	7.30	6.90	7.10	8.00	8.30	9.00
	SSP5-8.5	4.70	5.90	6.20	7.40	7.60	8.20	8.40	9.00	9.50
Storm Surge (Sea Level Rise)	SSP1-2.6	0.00	0.10	0.10	0.20	0.20	0.30	0.40	0.90	2.20
	SSP2-4.5	0.00	0.10	0.10	0.20	0.30	0.40	0.50	1.50	4.40
	SSP3-7.0	0.00	0.10	0.10	0.20	0.30	0.40	0.70	1.90	8.60
	SSP5-8.5	0.10	0.10	0.20	0.20	0.40	0.60	1.00	2.70	9.40

Source: Swiss Re Report RSCM, 2026

Table 57. Future Exposure Changes Details

		2030	2035	2040	2045	2050	2055	2060	2070	2085
Drought Score	SSP1-2.6	Negligible	Minor	Minor	Moderate	Significant	Significant	Significant	Significant	Moderate
	SSP2-4.5	Minor	Moderate	Moderate	Moderate	Moderate	Significant	Significant	Significant	Significant
	SSP3-7.0	Significant	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme
	SSP5-8.5	Minor	Moderate	Significant	Significant	Extreme	Extreme	Extreme	Extreme	Extreme
Heat Wave Score	SSP1-2.6	Significant	Significant	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme
	SSP2-4.5	Significant	Significant	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme
	SSP3-7.0	Significant	Significant	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme
	SSP5-8.5	Significant	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme
Heat Stress	SSP1-2.6	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
	SSP2-4.5	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
	SSP3-7.0	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
	SSP5-8.5	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Moderate
Wildfire	SSP1-2.6	Minor	Moderate	Moderate	Significant	Significant	Significant	Significant	Significant	Significant
	SSP2-4.5	Minor	Moderate	Moderate	Moderate	Moderate	Significant	Significant	Significant	Significant
	SSP3-7.0	Moderate	Significant	Significant	Significant	Significant	Significant	Extreme	Extreme	Extreme
	SSP5-8.5	Moderate	Moderate	Significant	Significant	Significant	Extreme	Extreme	Extreme	Extreme
Storm Surge (Sea Level Rise)	SSP1-2.6	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Minor
	SSP2-4.5	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Moderate
	SSP3-7.0	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Extreme
	SSP5-8.5	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Minor	Extreme

Source: Swiss Re Report RSCM, 2026

To assess how localized physical hazards will evolve over future decadal time steps extending to 2085, forward-looking Future Exposure Change (FEC) estimates are superimposed on the facility's current environmental baselines across four distinct Intergovernmental Panel on Climate Change (IPCC) Shared Socioeconomic Pathways (SSP1-2.6, SSP2-4.5, SSP3-7.0, and SSP5-8.5). While baseline geological and atmospheric threats remain critical operational factors, Swiss Re's predictive climate modeling predicts a risk-shifting paradigm for Central Jakarta, where rising global temperatures and disrupted hydrological cycles cause sharp increases in urban thermal and drought stressors. The table below provides thorough information on the healthcare facility's expected danger levels and developing risk classifications throughout nine future time frames.

Table 58. Climate Risks Scores

Score	Description	Risk
Fluvial Flood	Based on the mean return period change of peak river discharge, covering annual extreme precipitation (3-day; 99th percentile) coupled with Swiss Re's fluvial flood zones.	Risk of flooding from fluvial floods (river floods) leading to property losses or business interruption.
Pluvial Flood	Based on the mean return period change of annual extreme precipitation (1-day; 99th percentile) coupled with Swiss Re's pluvial flood zones.	Risk of flooding from pluvial floods (heavy rain) leading to property losses or business interruption.
Storm Surge (Sea Level Rise)	Based on the median change in sea level height coupled with Swiss Re's storm surge zones.	Risk of flooding from storm surge for coastal locations.
Extreme Precipitation	Calculated as the 99th percentile of 1-day extreme precipitation events per annum.	Risk of heavy downpour may lead to property losses or business interruption outside of flood zones.
Windstorm	Projected changes in extreme wind speeds, comparing the 98th percentile of near-surface wind velocity over a future 30-year period (e.g., 2015-2045 for the year 2030) with the historical baseline (1991-2020). It focuses on peak wind speeds rather than averages.	Risk of storm damage leading to property loss or business interruption.
Wildfire	Based on the change in number of days with high Fire Weather Index (FWI >21.3).	Risk of wildfire leading to property losses or business interruption.
Heat Wave	Based on the change in number of heatwave days per year.	Risk of heat waves leading to increased cooling cost, reduced productivity, or business interruption.
Heat Stress	Based on the number of days per year during which the maximum wetbulb globe temperature in shade (Twbg) is above 32°C.	Risk of heat stress with impact on the business operations or employees.
Drought	Based on the decrease in Aridity Index (AI = P/PET), which is the ratio between precipitation (P) and potential evapotranspiration (PET). It does not directly reflect the intensification of short-term drought conditions.	Risk of lack of water for business operations or destruction of agricultural yield.

Source: Swiss Re Report RSCM, 2026

To address these material physical climate risks, potential adaptation measures include:

Table 59. BES Indicator Key Insights

BES Indicator	State of BES (Degradation Level)	Hospital Dependency	Operational Relevance
Habitat Intactness	Very Low (Highly Degraded)	No Dependency	Low
Water Quality	Low	Moderate Dependency	Low
Erosion Control	Very Low (Highly Degraded)	Low Dependency	Moderate
Food & Timber Provision	Low	No Dependency	Low
Water Security	Very High	Moderate Dependency	Low
Air Quality & Local Climate	Not Defined	High Dependency (due to patient vulnerability)	High (implicitly important despite high-level dependency assessment)

Table 60. Disaster Risk Management Plan (STRATEGIC)

No	FMS Area	Risk	Root Cause	Impact	Existing Control	Planned Action Details	Building	Implementation Schedule	Responsible Party
1	Disaster	Hospital unpreparedness in facing global infectious diseases	1. PINERE guidelines have not been updated. 2. Simulations for handling global infectious diseases have not been conducted.	1. Increased spread of infectious diseases within the hospital. 2. Increased casualties due to infectious diseases.	Has the 2023 PINERE guidelines.	1. Formulate guidelines for the prevention and handling of global infectious diseases. 2. Conduct simulations for the prevention and handling of global infectious diseases. 3. Provide education regarding emerging/re-emerging diseases.	Entire RSCM	1. February 2026 2. March 2026 3. March 2026	FT PPI-PRA, IKLK3
2	Disaster	Evacuation delays	1. Evacuation procedures for critical patients/with life support equipment have not been simulated. 2. Safety induction is not available.	Casualties increase/ occur.	1. Using patient rescue procedures based on triage. 2. Has a safety induction video for Kiara Hall.	1. Create procedures and conduct simulations related to critical patients. 2. Map buildings/areas that do not have a safety induction yet. 3. Determine priority locations where safety inductions will be created.	Entire RSCM	1. March 2026 2. January 2026 3. February - September 2026	1. IKLK3, ULB 2-5. IKLK3, Public Relations Team (TK Hubmas), and related units

No	FMS Area	Risk	Root Cause	Impact	Existing Control	Planned Action Details	Building	Implementation Schedule	Responsible Party
						4. Create safety induction scenarios. 5. Create safety inductions.		4. February - September 2026	
3	Disaster	Incomplete equipment related to disasters and emergencies	1. Budget constraints. 2. Unmet equipment needs for disaster and emergency response. 3. Assembly point signs are frequently damaged due to being hit by vehicles.	1. Physical injuries occur. 2. Difficulty in implementing emergency/ rescue procedures according to protocol. 3. Visitors have difficulty finding assembly points.	Has HT (Handy Talkies), smoke blowers, megaphones (Toa), and evacuation route/assembly point signs.	1. Proposal and procurement of *evachair* (evacuation chairs). 2. Proposal and procurement of platoon tents. 3. Proposal and procurement of folding cots (*velbed*). 4. Proposal and procurement of emergency lamps. 5. Proposal and procurement of handy talkies. 6. Map rooms that do not have an emergency map yet. 7. Determine priority rooms that do not have an emergency map.	Entire RSCM	1. February 2026 2. February 2026 3. February 2026 4. January 2026 5. February 2026 6. February 2026 7. February 2026	IKLK3, IPSRS

No	FMS Area	Risk	Root Cause	Impact	Existing Control	Planned Action Details	Building	Implementation Schedule	Responsible Party
						8. Create emergency maps. Fulfill emergency map frame proposals and procurement. 9. Proposal and procurement of evacuation signs. 10. Repair damaged emergency doors.		8. January 2026 9. June 2026 10. January - December 2026	
4	Disaster	Unavailability of water and electricity during disasters	Simulation regarding the provision of water and electricity during disasters has not been conducted.	1. Disrupted services. 2. Decline in hospital reputation.	Has a backup water supply using groundwater and electricity using generators (genset).	1. Re-evaluate the readiness of alternative electricity and water sources, both in terms of facilities and procedures. 2. Perform routine maintenance on water and electricity supply installations. 3. Simulate the readiness of electricity and water sources during disasters or emergencies. 4. Form partnerships	Entire RSCM	1. March 2026 2. January - December 2026 3. May 2026 4. May 2026	IPSRS

No	FMS Area	Risk	Root Cause	Impact	Existing Control	Planned Action Details	Building	Implementation Schedule	Responsible Party
						with external water and electricity providers.			
5	Disaster	Lack of hospital preparedness for megathrust disasters	1. Lack of coordination reinforcement with external disaster management authorities. 2. No joint simulation with external disaster management authorities. 3. No corporate-wide simulation for the entire hospital. 4. The ERP (Emergency Response Plan) has not included procedures for special populations.	1. The hospital cannot operate. 2. Human casualties.	1. Consolidation with external disaster management authorities. 2. Internal disaster simulations have been conducted periodically. 3. Visits to BMKG (Meteorology, Climatology, and Geophysics Agency) as an educational tool for disaster management.	1. Identify potential hazards that may occur in the hospital. 2. Map emergency patient care locations. 3. Implement HSI (Hospital Safety Index assessment: structural, non-structural, hospital management preparedness system, scoring, safety index calculation). 4. Review hospital policies regarding the hospital's role during emergencies and disasters, emergency/disaster SOPs according to risk maps, internal & external communication flows &	Entire RSCM	1. February 2026 2. April 2026 3. February - March 2026 4. February 2026	1. IPSRS, IKLK3 2. IKLK3, TK Yanmed, IGD 3. IPSRS, IKLK3, and related units 4. IKLK3, IPSRS, PPI, IPAKK, Security, Yanjang, Yanmed

No	FMS Area	Risk	Root Cause	Impact	Existing Control	Planned Action Details	Building	Implementation Schedule	Responsible Party
						strategies during emergencies, and emergency patient care location mapping.			
						5. Conduct corporate-wide simulations.		5. February - May 2026	5. IKLK3, IPSRS, TK Yanmed, IGD, TK OSDM, and other related units
						6. Debrief post-corporate simulation.		6. May - July 2026	6. All RSCM employees
						7. Build partnerships with external parties.		7. May - July 2026	7. IKLK3, Legal Team (TK Hukum) and Public Relations (Hubmas)

Annex 2 - Labor Management Plan

LABOR MANAGEMENT PLAN (LMP)
RSUP NASIONAL DR. CIPTO MANGUNKUSUMO

1. Human Resources Management and Industrial Relations

RSCM is committed to managing all human resources professionally, transparently, and equitably through regular performance evaluations to ensure patient safety and high-quality healthcare delivery.

Key Points:

- Rights, obligations, and code of conduct apply to all employees, including civil servants (ASN) and non-civil servants (Non-ASN), within RSCM.
- Qualitative and quantitative performance evaluations for medical staff are conducted periodically every 6 months to determine competency follow-ups, re-credentialing, or adjustments to clinical privileges.

Regulation Reference:

Peraturan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/D.IX/6552/2023 about *Perubahan atas Peraturan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/4.2/16672/2022 about Pengelolaan Kepegawaian di RSUP Nasional Dr. Cipto Mangunkusumo*.

2. Working Hours and Attendance Provisions

The management of working hours and shifts at RSCM is aligned with central government regulations for government institutions, while ensuring 24-hour continuous hospital operations through an integrated system.

Key Points:

- Standard weekly and daily working hours must be strictly followed by all employees, supported by disciplined attendance recording (no tolerance for failing to record attendance).
- Specific working hours during the holy month of Ramadan are regulated separately in accordance with prevailing laws.
- Monitoring and evaluation of staff attendance are strictly managed by the Organization and Human Resources Working Team.

Regulation Reference:

Peraturan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/D.IX/9797/2025 about *Pemberlakuan Waktu dan Jumlah Jam Kerja di RSUP Nasional Dr. Cipto Mangunkusumo*.

3. Overtime Policy

Work performed outside regular working hours is highly regulated to maintain the efficiency of employee spending budgets, boost productivity, and provide fair compensation for staff completing urgent extra duties.

Key Points:

- Overtime compensation is granted to eligible employees who complete urgent healthcare services or administrative tasks outside regular shift hours.
- No duplication of data input: Overtime performance achievements must not be re-entered into regular daily or monthly performance reports.
- Overtime submission processes must strictly comply with the hospital's financial administration procedures.

Regulation Reference:

Peraturan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/D.IX/12542/2025 about *Kebijakan Lembur di RSUP Nasional Dr. Cipto Mangunkusumo*.

4. Employee Leave Policy

RSCM ensures employees' rights to rest and leave in compliance with national civil service standards to maintain work-life balance, well-being, and operational sustainability.

Key Points:

- Employees are entitled to various types of leave, including annual leave, long-service leave (*cuti besar*), sick leave, maternity leave, leave for important personal reasons (*cuti karena alasan penting*), and collective leave (*cuti bersama*).
- For employees on leave who are officially called back to duty due to urgent hospital needs, the remaining unused leave period remains their valid right to be taken at a later date.
- Implementation and monitoring of the leave process across each department are supervised directly by Managers, Heads of Units, and Assistant Managers.

Regulation Reference:

Peraturan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/D.IX/13262/2025 about *Tata Cara Pelaksanaan Cuti Pegawai di RSUP Nasional Dr. Cipto Mangunkusumo*.

5. Wages, Remuneration, and Welfare System

RSCM implements a performance-based remuneration system (*pay for performance*) following principles of proportionality, appropriateness, and equality to incentivize high performance and guarantee employee welfare.

Key Points:

- Salaries for Non-ASN BLU employees are regularly adjusted based on government wage adjustments to ensure decent living standards.
- Remuneration components consist of basic salary, incentives, and performance allowances, which are evaluated monthly by the President Director and reported to the Directorate General of Health Services.
- Employees are entitled to Holiday Allowances (THR) and the 13th-month salary funded by the state budget (APBN) and Non-Tax Revenue (PNBP) generated by the hospital's BLU mechanism.

Regulation Reference:

- **Keputusan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/D.IX/979/2024** about *Gaji Pegawai Badan Layanan Umum (BLU) Non Aparatur Sipil Negara (Non ASN) di RSUP Nasional Dr. Cipto Mangunkusumo*.
- **Keputusan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/D.IX/1338/2025** about *Pelaksanaan Remunerasi bagi Pejabat Pengelola, Pegawai, dan Dewan Pengawas Badan Layanan Umum di RSUP Nasional Dr. Cipto Mangunkusumo*.
- **Keputusan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/D.IX/16467/2024** about *Pelaksanaan Remunerasi bagi Pejabat Pengelola, Pegawai, dan Dewan Pengawas Badan Layanan Umum di RSUP Nasional Dr. Cipto Mangunkusumo*.
- **Keputusan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/D.X/5019/2026** about *Petunjuk Teknis Pelaksanaan Pemberian Tunjangan Hari Raya dan Gaji Ketiga Belas Bagi Pejabat Pengelola, Dewan Pengawas, dan Pegawai pada Badan Layanan Umum RSUP Nasional Dr. Cipto Mangunkusumo Tahun 2026*.

6. Management of Special Workforce (Partner Doctors and Trainee Physicians)

As a national referral and teaching hospital, RSCM strictly regulates the mobilization of external partner doctors and medical students/residents undergoing specialist programs to maintain standardized clinical quality.

Key Points:

- Partner Doctors (*Dokter Mitra*) and Trainee Physicians (*Dokter Peserta Didik*) must have clear cooperation agreements, predefined scopes of services, and working hour schedules aligned with the hospital's internal rules.
- Performance monitoring of these groups is conducted under the coordination of the Directorate of Medical Services and Nursing, alongside the Directorate of HR, Education, and Research.

Regulation Reference:

Peraturan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/D.IX/1735/2025 about *Pengelolaan Dokter Mitra dan Dokter Peserta Didik di RSUP Nasional Dr. Cipto Mangunkusumo*.

7. Risk Management for Medical Staff Without Active Practice Permits

To prevent malpractice and mitigation of employment-related legal risks, RSCM strictly restricts any medical staff whose Medical Practice License (SIP) has expired through temporary administrative reassignments.

Key Points:

- All medical and healthcare practitioners must hold a valid and active SIP to provide direct clinical care to patients.
- Personnel with expired licenses are banned from performing any medical procedures and are temporarily moved to special administrative roles, resulting in a temporary reduction of their job value tier (*Nilai Jabatan*) under close departmental supervision.
- Clinical privileges and original employee status are automatically fully restored once the renewed SIP is officially issued.

Regulation Reference:

Peraturan Direktur Utama RSUP Nasional Dr. Cipto Mangunkusumo Nomor: HK.02.03/D.IX/9421/2025 about *Penugasan Khusus Bagi Tenaga Medis dan Tenaga Kesehatan yang Tidak Memiliki Izin Praktik di RSUP Nasional Dr. Cipto Mangunkusumo*.

Annex 3 - Stakeholder Engagement Plan

1. Purpose of Stakeholder Engagement Plan

The Stakeholder Engagement Plan (SEP) is intended to provide a plan for identifying and engaging project stakeholders, particularly those who are affected, on a regular basis throughout the project cycle. These parties include, among others local community leaders (Representatives from the Pegangsaan and Kenari Neighbourhoods, the Community Early Warning Forum (FKDM), the Family Empowerment and Welfare Movement (PKK), and the Neighborhood Community Organization (LMK)), municipal authorities (The Civil Service Police, the Provincial Health Department, the Public Works Department, the Parks and Urban Forestry Department, the Fire Department, the Public Works and Spatial Planning Department, the Jakarta Capital Investment and Integrated Services Department, and the Provincial Culture Department) and hospital staff. During the implementation of this SEP, project stakeholders, particularly the affected parties, will engage in meaningful consultation to understand the project's purpose, nature, scale, duration of its activities, its potential environmental and social risks and impacts, proposed mitigation measures, grievance redress mechanism, and provide feedback based on such information to help the project avoid, minimize, and mitigate potential risks and impacts during project design.

The SEP also establishes institutional frameworks to facilitate effective participation of project stakeholders during execution. The project acknowledges that the voices of disadvantaged/vulnerable groups, such as women, indigenous peoples, and people with disabilities, are critical to ensuring that these groups are not adversely and disproportionately affected throughout project execution. The SEP outlines strategies to ensure that relevant feedback from disadvantaged individuals is solicited and included into project design and execution. It also ensures that project stakeholders, particularly those affected, can participate in monitoring the project's risks and impacts management process and provide timely feedback, allowing the project to effectively manage risks and potential environmental and social impacts.

2. Proposed Strategy for Information Disclosure

Information disclosure is a process aimed at ensuring that essential project-related information is communicated to identified stakeholders in a timely, transparent, and accessible manner. The information should be presented using suitable language, formats, and communication approaches to ensure it can be easily understood by the intended audience. Under this Project, relevant information will be made publicly available throughout both the planning and implementation stages through the Hospital's official website.

The Project will prepare English-language versions of the Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP). In addition, summaries of these documents will be provided and disseminated through the Hospital's website, while hard copies will be made accessible in designated public information areas within RSCM to support wider stakeholder engagement and access to project information.

3. Proposed Strategy for Public Consultation

Consultation serves as a participatory communication mechanism through which the Project implementing agency and stakeholders can exchange information, concerns, and recommendations. To promote informed participation, stakeholders will be provided with relevant project information in advance, particularly information related to environmental and social (E&S) risks, anticipated impacts, and the measures proposed to manage or mitigate such impacts.

As part of project preparation, consultation activities were carried out on June 11, 2026 with representatives of various stakeholder groups, including individuals, communities considered vulnerable, and relevant government agencies concerned with the potential impacts of construction work and related environmental and social issues. These consultations provided an opportunity to obtain stakeholder input and identify issues requiring further consideration during project planning.

During project implementation, stakeholder engagement will be maintained through ongoing consultation activities involving all groups that may be affected by the Project. These groups include representatives of local residents, community organizations, relevant government agencies, patients, and healthcare workers. The consultation process will help ensure that stakeholder concerns, expectations, and suggestions are appropriately considered throughout the implementation of the Project.

The following principles will guide stakeholder consultation activities, particularly for communities and individuals potentially affected at the subproject level:

- Stakeholder feedback will be sought, reviewed, and integrated into project planning and implementation processes before the commencement of any project-related activities, including construction works and the demolition of unused facilities or structures.
- Consultation activities will engage both directly affected stakeholders and other interested parties. Special attention will be given to ensuring the participation of vulnerable groups, including women, older persons, and patients.
- Feedback and issues raised by stakeholder included concerns about the community's exposure to dust caused by the construction work; the hospital will provide free health checks to assess the impact of upper respiratory tract infections on the local community. The community is also concerned about the cleanliness of the surrounding environment and damage to roads caused by project workers; mitigation measures will therefore be put in place, such as deploying cleaning staff to ensure the local environment remains clean, whilst road repairs will be carried out by the contractor. Local traders have also requested relocation should land clearance take place, but RSCM has stated that there will be no land clearance. Should it be necessary, efforts will be made to provide suitable alternative accommodation. Complaints can be submitted via the hotline number, so that any public concerns during the construction period can be communicated directly to the hospital. The community also wishes to see opportunities for local residents to work on

the project, and the hospital will provide further updates regarding the number of local workers who can be involved.

- Feedback received from other policy makers namely, government agencies that attended this event included suggestions regarding the involvement of cultural heritage experts, the presentation of the project to the Governor, AMDAL planning and green building design, the creation of fire access routes, and input regarding the location of electric vehicle parking spaces. All of this feedback will be considered and addressed during the planning process for the EIA, the Detailed Engineering Design (DED), and the building permit approval.

4. Project Stakeholders Matrix

The following list identifies the essential stakeholders whose interests, vulnerabilities, and institutional roles must be systematically incorporated into the project's ongoing ESIA planning and mitigation frameworks.

A. Stakeholders in Vulnerable Groups

- Informal Workers and Street Vendors (PKL): Micro-traders operating along the sidewalks of the Salemba-Diponegoro corridors near the hospital boundaries.
- Local Residential Communities (*Kampung Kota*): Residents of high-density urban settlements in Kelurahan Kenari and Kelurahan Pegangsaan located directly behind the RSCM complex.
- Outpatients and Special Visitors: Elderly individuals, pregnant women, children, and physically disabled patients requiring universal accessibility.
- Female Medical Staff and Patients: Women within the project zone requiring safety protections against social risks related to the influx of external labor.
- High-Risk Inpatients: Critically ill patients in Intensive Care Units (ICU), neonatal wards, and operating theatres adjacent to active construction zones.

B. Stakeholders in Sensitive Areas & Traffic Management

- RSCM Emergency Medical Teams & Ambulance Operators: Internal hospital personnel responsible for ensuring uninterrupted emergency route access ("golden hour") for critical patients.
- Jakarta Transportation Agency (*Dishub DKI Jakarta*): The local regulatory authority responsible for reviewing, approving, and monitoring the Traffic Management Plan (TMP).
- PT Transportasi Jakarta (TransJakarta): Public transport operators managing the active Busway lanes and public bus stops bordering the project site.
- Faculty of Medicine, Universitas Indonesia (FKUI): Management of adjacent university campuses and medical laboratories sensitive to construction noise and physical vibrations.
- Local Public and Religious Facility Managers: Administrators of nearby mosques and public spaces sensitive to continuous acoustic disturbances.

- EPC Contractor: The third-party project builder responsible for deploying 24/7 traffic flagmen and operating compulsory high-pressure wheel-washing bays.
- Urban Utility Providers: State enterprises managing underground clean water pipelines (PAM), high-voltage electricity cables (PLN), and fiber-optic communication networks within the excavation zones.

Annex 4 - Cultural Heritage Management Plan

CULTURAL HERITAGE MANAGEMENT PLAN (CHMP)

RSUP NASIONAL DR. CIPTO MANGUNKUSUMO

1. PURPOSE OF THE CHMP

This Cultural Heritage Management Plan (CHMP) has been prepared to provide a framework for protecting and managing cultural heritage resources that may be affected by the RSCM Redevelopment Project Phase I.

The CHMP supplements the Cultural Heritage Impact Assessment presented in the ESIA and establishes management measures, monitoring requirements, institutional responsibilities, reporting procedures, and emergency response mechanisms to ensure that redevelopment activities are undertaken in accordance with:

- AIIB Environmental and Social Framework (ESF);
- World Bank's Environmental and Social Standard 8 (ESS8: Cultural Heritage)
- IFC Performance Standard 8 – Cultural Heritage;
- Law No. 11 of 2010 concerning Cultural Heritage;
- Governor of DKI Jakarta Decree No. 475 of 1993.

This CHMP applies to all demolition, excavation, construction, and operational activities undertaken within the RSCM Redevelopment Project area.

The objectives of this CHMP are to:

- Identify cultural heritage assets located within the project area.
- Define the significance and sensivity of heritage resources.
- Assess potential impacts associated with redevelopment activities.
- Establish mitigation measures and monitoring requirements.
- Define institutional responsibilities.
- Establish emergency response procedures.
- Establish Chance Find Procedures.

2. CULTURAL HERITAGE ASSETS SUBJECT TO PROTECTION

The following designated Cultural Heritage Buildings located within the RSCM complex are subject to protection under this CHMP.

Table 61. Preliminary Assessment of Heritage Sensitivity

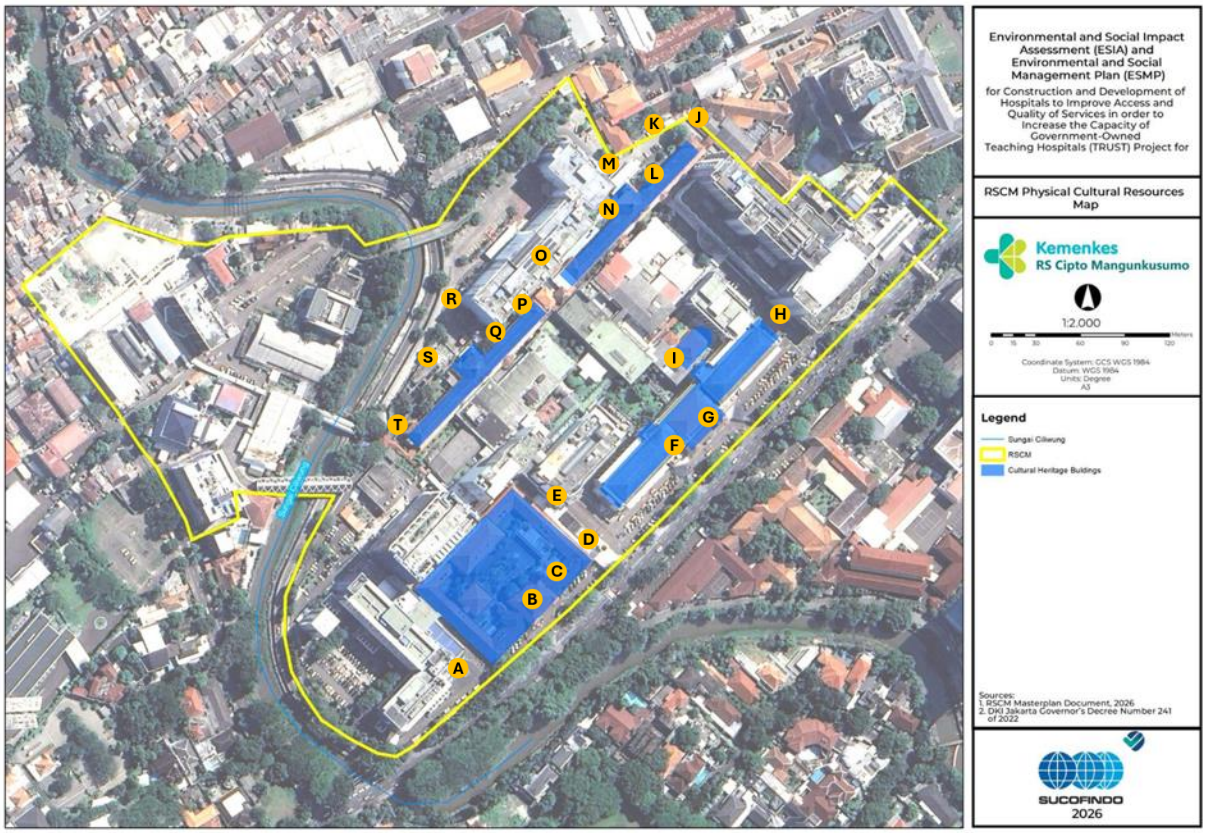
Heritage Element	Heritage Status	Significance Level	Sensitivity to Redevelopment	Remarks
Management office building	Cultural Heritage Building	High	High	Primary heritage façade and principal historic identity of the RSCM
Office Building	Cultural Heritage Building	High	High	Historic institutional office building
Eijkman Institute Building	Cultural Heritage Building	High	High	Principal historic identity of the RSCM
G and H Building	Cultural Heritage Building	High	High	Historic institutional office building
Statue of Dr. Cipto Mangunkusumo and surrounding landscape	Cultural Landscape Element	Moderate to High	Moderate to High	Symbolic and visual heritage element
Supporting Structures Proposed for Demolition	Existing Support Structures	Low to Moderate	Low to Moderate	Requires documentation prior to demolition

3. CRACK MAPPING & STRUCTURAL MONITORING PROGRAM

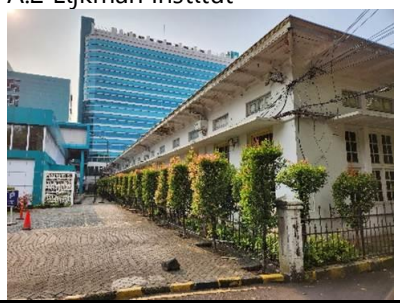
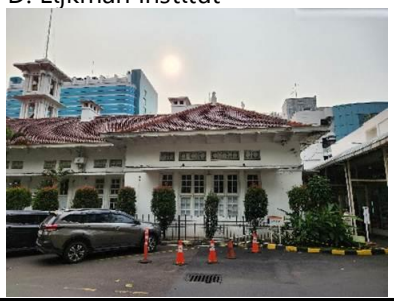
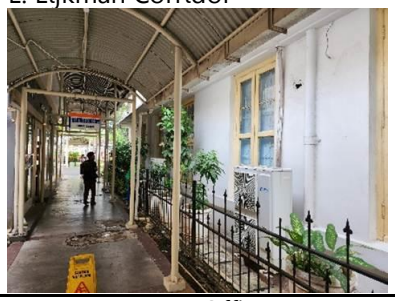
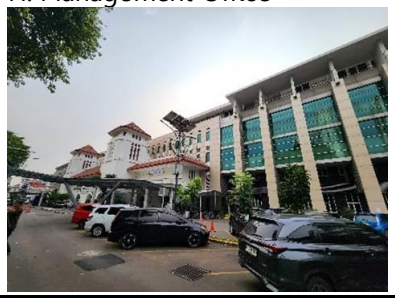
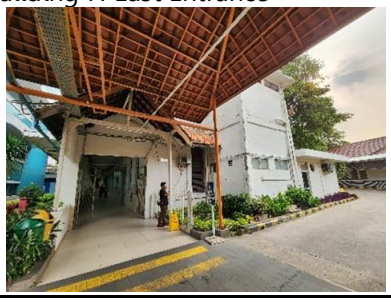
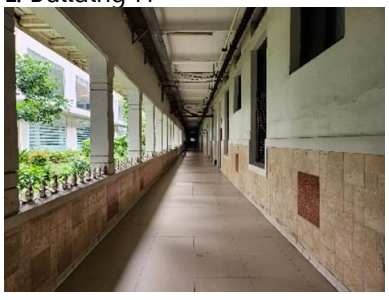
To prevent construction-induced failures, a continuous monitoring protocol must protect the cultural heritage buildings.

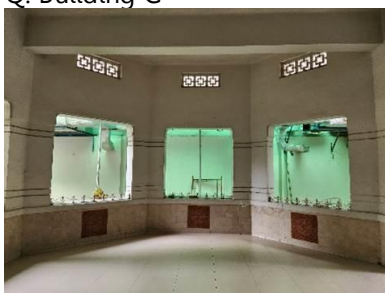
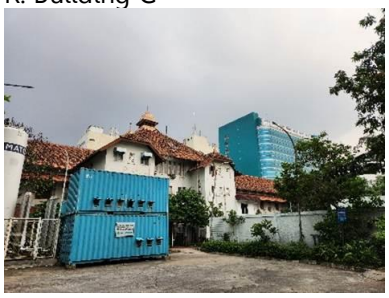
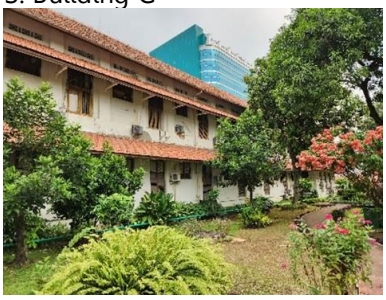
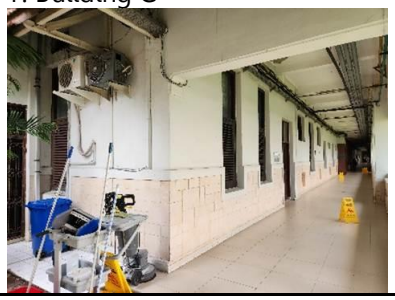
3.1 Preliminary Visual Baseline

This section provides a Preliminary Photographic Overview to identify the general visual condition, architectural typologies, and spatial vulnerabilities of the RSCM heritage assets. The formal, millimeter-precise Dilapidation Survey and Crack Mapping remains a mandatory Pre-Construction obligation for the Contractor (see Section 3.2).


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Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP)
for Construction and Development of Hospitals to Improve Access and Quality of Services in order to Increase the Capacity of Government-Owned Teaching Hospitals (TRUST) Project for
RSCM Physical Cultural Resources Map
Kemenkes
RS Cipto Mangunkusumo
1:2.000
Legend
Sungai Ciliwung
RSCM
Cultural Heritage Buildings
Sources:
1. RSCM Masterplan Document, 2026
2. DKI Jakarta Governor's Decree Number 241 of 2022
SUCOFINDO
2026

Cultural Heritage Building Visual Condition

A.1 Eijkman Institut 	A.2 Eijkman Institut 	A.3 Eijkman Institut 
B. Eijkman Institut 	C. Eijkman Institut 	D. Eijkman Institut 
E. Eijkman Corridor 	F. Management Office 	G. Management Office 
H. Management Office 	I. Office Building 	J. Building H East Entrance 
K. Building H 	L. Building H 	M. Building H 

N. Building H 	O. Building H 	P. Building G 
Q. Building G 	R. Building G 	S. Building G 
T. Building G 	T. Building G 	T. Building G 

Location ID (Map)	Architectural Elements & Visual Overview	Surface Condition	Risk Identification	Interface Vulnerability
A.1, A.2, A.3, B, C, D, E (Ejkman Institut)	Main facade featuring *Nieuwe Kunst* architectural style, showcasing structural masonry (load-bearing walls), pitched roofs, and symmetrical, repetitive fenestration.	Visually intact and stable. Shows signs of natural weathering, minor discoloration on the lower plinth, and slight biological growth on the exterior plaster.	**HIGH RISK**	Highly vulnerable to ground-borne vibration. The facades are situated directly adjacent to asphalt circulation areas, necessitating strict protection from heavy machinery maneuvering.
F, G, H (Management Office Building)	The primary building elevation featuring an iconic arched entrance portal and classical detailing. This serves as the principal visual face and historical identity of RSCM.	Exceptionally well-maintained. The plaster surfaces, paintwork, and roof covering integrity appear in good condition visually.	**MODERATE RISK**	The primary risk is exposure to construction-generated silica dust, which could severely degrade the historic facade finishes.
L, N, O, P, Q, T	Corridors in G & H Building where historic masonry is directly exposed to and integrated with modern mechanical, electrical, and plumbing (MEP) installations. Pipes, conduits, and HVAC compressor units are anchored directly into the historic brickwork.	Some structural geometry appears stable. However, the heritage walls have sustained multiple modern bolt and anchor penetrations over time, potentially creating unseen structural micro-cracking. There is also visible surface degradation on the lower wall plaster, indications of slight dampness, and observable cracking on several columns and masonry walls. A detailed crack mapping survey will be strictly conducted by the Principal Contractor during the pre-construction phase.	**HIGH RISK**	The demolition or relocation of MEP installations in this area could pull or tear the aging masonry. Precision cutting is mandatory, and the use of prying tools is strictly prohibited. The exposed timber roof elements are highly susceptible to construction dust accumulation. The corridor columns are at a **high** risk of accidental physical impact from contractor logistics and material transport, and vibration impact from construction process.
J, K, M, R, S	Secondary and lateral heritage elevations oriented away from the primary Development and Demolition Zones. These sections feature continuous load-bearing historic masonry and secondary fenestrations, physically shielded from the direct line of sight of	Structurally stable with typical age-related weathering, such as minor plaster discoloration and surface fatigue. *Note: A comprehensive pre-construction crack mapping survey by the Principal Contractor remains strictly mandatory to document*	**MODERATE RISK (Indirect Exposure)**	While safe from direct mechanical impacts or crane collisions, these walls are structurally integrated with the main heritage mass. They remain highly susceptible to "flanking vibrations" (seismic energy transferring continuously through the shared foundations and masonry

Location ID (Map)	Architectural Elements & Visual Overview	Surface Condition	Risk Identification	Interface Vulnerability
	the heavy construction activities.	*any latent, pre-existing structural flaws.*		walls) and secondary airborne dust settling.

3.2 Pre-Construction Baseline Survey

A Preliminary Visual Baseline has been conducted by the ESIA Consultant to identify general conditions and spatial vulnerabilities. However, the following formal steps remain a strict Pre-Construction obligation for the Contractor.

- Laser Scanning: Complete Terrestrial Laser Scanning (TLS) to map existing structural deviations, wall tilting, and hairline crack patterns on the heritage building facades.
- Crack Inventory: Every pre-existing fissure must be logged in the Heritage Structural Asset Monitoring Log, categorized by size and structural vector.

4. SITE DEMARCATION & ZONING PROTOCOL

4.1 Physical Barricading

- Core Zone (0 – 15m from heritage facades): Contractor must install a continuous, 2-meter-high rigid hoarding painted with visible red "No Heavy Equipment" warnings.
- Buffer Zone (15 – 50 m): Contractor must install yellow high-visibility fencing. Entrance to this zone requires a specific "Permit to Work" signed by the HSE Officer.

4.2 Protective Coverings & Impact Mitigation

- Weatherproofing: Deploy fire-retardant, breathable geotextile sheets over the scaffolding and heritage facades to isolate historic material from corrosive silica dust and weather exposure.
- Crash-Deck Scaffolding: Contractor must erect heavy-duty crash-deck scaffolding above highly vulnerable architectural elements (such as the historic timber roof corridors) to protect against accidental impact loads, falling debris, and crane swing paths.

5. VIBRATION CONTROL & MONITORING PLAN

5.1 Seismograph Installation & Calibration

Install real-time vibration sensors (seismograph) directly onto the load-bearing masonry of the Eijkman Building, G & H Buildings, and heritage office buildings.

5.2 Thresholds (Trigger Action Response Plan)

- Green (Normal): < 2.0 mm/s. Continue operations using standard heritage-approved methods.
- Amber (Warning): 2.0 – 2.8 mm/s. HSE Office notified. Contractor must slow down demolition speed and identify the specific machine causing the spike. Reduce throttle, change impact angle, or switch to a lower-energy tool.

- Red (Stop Work): > 3.0 mm/s. Immediate Site Shutdown within a 20-meter radius. Conduct a manual engineering assessment of the heritage structure. Work cannot resume until TACB Jakarta and the Heritage Expert team issue a written clearance.

6. DEMOLITION METHOD STATEMENT

- STEP 1: Complete baseline dilapidation survey (crack mapping).
- STEP 2: Install temporary heavy-duty steel shoring (Façade Retention System) directly against the exposed historic masonry to prevent lateral movement, wall tilting, or shear cracking during the demolition phase.
- STEP 3: Execute structural decoupling using handheld diamond wire saws. Create a physical 1-meter air gap between the heritage building and the building to be demolished.
- STEP 4: Utilize hydraulic crushers (pulverizers). Strictly prohibited: Hydraulic impact hammers (peckers) or wrecking balls within the 50m Buffer Zone.
- STEP 5: Implement continuous water-misting at the crusher jaws to mitigate silica dust settling on historic facades.

7. EMERGENCY & CHANCE FIND PROCEDURES

7.1 Structural Distress Protocol

If new cracking is visually observed on heritage facades:

1. Halt all operations in the sector.
2. Take timestamped macro-photographs of the crack.
3. Notify the Conservation Architect immediately.

7.2 Chance Find Procedure (Subsurface Artifacts)

1. STOP: Cease digging immediately. Construction works shall immediately stop within the affected area.
2. SECURE: Cordon off a 10-meter perimeter around the find.
3. REPORT: Site Manager contacts the PMU and Archaeologist within 1 hour.
4. RECORD: Take initial photographs (with physical scale/ruler in the frame) within 24 hours. Do not remove the artifact. Construction may resume only after official clearance has been issued.

Annex 5 - Land Use Permit

1. Building Permit (IMB) - 2017

- Permit Number: 0149/8.1/31.71.04.1002/-1.785.51/2017
- Location: Jl. Diponegoro No. 71, RT000/RW000, Kel. Kenari, Kec. Senen, Jakarta Pusat
- Regulation / Title: Decree of the Head of the Capital Investment and One-Stop Integrated Services Agency of DKI Jakarta Province concerning Building Permit (Izin Mendirikan Bangunan)
- Building Type / Purpose: Non-Residential Building Expansion for Radiology, Radiotherapy, & Cobalt Linac Room (1 Floor, additional area of 770 m²)

2. Building Permit (IMB) - 1997

- Permit Number: 02686/IMB/1997
- Location: Jl. Diponegoro No. 71, Kel. Kenari, Kec. Senen, Wil. Jakarta Pusat
- Regulation / Title: Decree of the Governor of the Capital Special Region of Jakarta concerning Building Permit (Izin Mendirikan Bangunan)
- Building Type / Purpose: Building Expansion for a Laboratory (1 unit, 1 floor, total area of 6,378.00 m²)

3. Building Permit (IMB) - 2016

- Permit Number: 0213/8.1/31.71.04.1002/-1.785.51/2016
- Location: Jl. Diponegoro No. 71, Kel. Kenari, Kec. Senen, Jakarta Pusat
- Regulation / Title: Decree of the Head of the One-Stop Integrated Services Agency of DKI Jakarta Province concerning Building Permit (Izin Mendirikan Bangunan)
- Building Type / Purpose: Non-Residential Building Expansion for Hospital and its Facilities (2 Floors, new building area of 414 m²)

4. Building Permit (IMB) - 2008

- Permit Number: 1507/IMB/2008
- Location: Jl. Diponegoro No. 71, RT000/000, Kel. Kenari, Kec. Senen, Jakarta Pusat
- Regulation / Title: Decree of the Head of the Building Spatial and Supervision Agency of DKI Jakarta Province concerning Building Permit (Izin Mendirikan Bangunan)
- Building Type / Purpose: New Building Construction for Hospital and Facilities (2 building blocks, 9 floors, 1 basement level, total area of 35,892 m²)

5. Building Permit (IMB) - 1986

- Permit Number: 02039/IMB/1986
- Location: Jl. Diponegoro 71, Kel. Kenari, Jakarta Pusat

- Regulation / Title: Decree of the Governor of the Capital Special Region of Jakarta concerning Building Permit (Izin Mendirikan Bangunan)
- Building Type / Purpose: New Building Construction for a Permanent Hospital (5 Floors, with concrete foundations, walls, and structures)

6. Building Permit (IMB) - 2013

- Permit Number: 6289/IMB/2013
- Location: Jl. Diponegoro No. 71, Kel. Kenari, Kec. Senen, Jakarta Pusat
- Regulation / Title: Decree of the Head of the Building Supervision and Enforcement Agency of DKI Jakarta Province concerning Building Permit (Izin Mendirikan Bangunan)
- Building Type / Purpose: New Building Construction with Social-Cultural Functions used as Hospital and Facilities (5 building blocks, 8 floors, 0 basements, total new building area of 27,095.04 m^2)

Annex 6 – Gender Action Plan

1. Introduction and Objectives

The Gender Action Plan (GAP) establishes a structured framework to ensure gender mainstreaming, promote equal opportunity, and mitigate gender-specific risks throughout the pre-construction, construction, and operational phases of the RSCM Modernization Project.

In alignment with AIIB's Environmental and Social Framework (ESF), national gender equity mandates, and international standards (such as IAEA GSR Part 3 and WHO guidelines for female radiation workers), the objectives of this GAP are to:

- Ensure equal access, voice, and benefits for female stakeholders (including hospital staff, patients, informal vendors, and surrounding community members).
- Establish robust, survivor-centered prevention and response protocols for Gender-Based Violence (GBV), Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH).
- Promote gender inclusivity within the construction workforce and project management structures.

2. Gender Action Plan Matrix

Project Phase / Key Area	Identified Risk / Opportunity	Proposed Action / Mitigation Measure	Target / Indicator	Responsible Entity	Budget Source
1. Consultation & Stakeholder Engagement	Female stakeholders (patients, nurses, female vendors/PKL) are underrepresented in public consultation forums.	• Conduct dedicated, female-only focus group discussions (FGDs) in safe, accessible venues. • Provide child-friendly consultation spaces and flexible meeting times.	• Minimum **40% female participation** in all public consultations. • Specific vendor census disaggregated by gender.	PMU Social Specialist / RSCM Humas	Project Preparation Budget
2. GBV / SEA / SH Prevention & Mitigation	Heightened risks of GBV/SEA/SH due to large construction labor influx impacting female staff, patients, and surrounding *kampung* residents.	• Mandatory **Worker Code of Conduct (CoC)** explicitly banning GBV/SEA/SH, signed by 100% of workers during onboarding. • Install zero-tolerance GBV signage around construction perimeters, workers' camps, and vendor zones. • Separate, secure, well-lit sanitary and changing facilities for male and female workers/visitors.	• **100% worker signature** on CoC prior to site entry. • Zero unaddressed SEA/SH incidents. • Mandatory GBV orientation for all contractors.	EPC Contractor / PMU EHS Focal Point	Contractor C-ESMP Budget
3. Project-Level GRM Enhancement	Standard hospital GRM lacks safe, confidential pathways for reporting sensitive SEA/SH or harassment grievances.	• Establish a **confidential, female-led GRM intake pathway** with dedicated WhatsApp/hotline numbers. • Formalize referral protocols with local women's protection NGOs / legal assistance bodies (*e.g., UPTD PPA Jakarta Pusat*).	• 100% of SEA/SH grievances acknowledged within **24 hours** and processed via survivor-centered protocols.	PMU Gender Focal Point / RSCM Ethics Committee	Project ESMP Operational Budget

Project Phase / Key Area	Identified Risk / Opportunity	Proposed Action / Mitigation Measure	Target / Indicator	Responsible Entity	Budget Source
4. Workforce & Labor Practice	Gender discrimination in construction hiring and unequal pay for female workers.	• Enforce equal pay for equal work. • Ensure non-discriminatory recruitment practices by the EPC contractor. • Provide appropriate PPE fitted for female workers and specialized safety protocols for pregnant/nursing staff (e.g., radiation safety under BAPETEN/RPO oversight).	• Minimum **15–20% female representation** in non-heavy labor/administrative/EHS contractor roles. • Zero gender pay gap for equal job categories.	EPC Contractor / HR Division	Contractor Overhead
5. Support for Female Informal Vendors	Female street vendors (*PKL*) along outer fence boundaries facing disproportionate economic disruption and safety risks.	• Prioritize vulnerable female-headed households in temporary trading spot allocations during fence excavation. • Maintain well-lit, barricaded pedestrian boardwalks to protect vendor safety and foot traffic.	• 100% of surveyed female vendors protected from arbitrary eviction and provided clear access.	RSCM / Central Jakarta Local Govt / Contractor	ESMP Livelihood Support Budget
6. Health, Safety & Radiation Protection	Health and radiological risks for female healthcare workers in Nuclear Medicine/SPECT-CT areas.	• Strict adherence to BAPETEN/IAEA guidelines regarding exposure monitoring for female staff of reproductive age. • Dedicated lead-shielded environments and RPO-supervised dosage tracking.	• **100% compliance** with annual radiation dose limits per BAPETEN Regulation No. 16/2014.	RSCM Radiation Safety Officer (RPO) / Occupational Health	RSCM Operational Budget

3. Institutional Implementation & Monitoring Arrangements

- Gender Focal Point: The PMU will designate a qualified Social and Gender Specialist responsible for monitoring GAP execution, coordinating GBV/SEA/SH training, and liaising with local women's groups.
- Monitoring & Reporting: GAP indicators will be integrated into the quarterly Environmental and Social Monitoring Reports submitted to the Asian Infrastructure Investment Bank (AIIB).
- Capacity Building: Mandatory gender-sensitivity and SEA/SH prevention training will be conducted semi-annually for all contractor site supervisors, security personnel, and PMU staff.

Annex 7 – Relocation Plan

Cipto Mangunkusumo Hospital has established a relocation schedule for services affected by the construction of Superblock 1. The services located in the Superblock 1 building area comprise the Emergency and Diagnostic Center, with service units including the emergency room, integrated laboratory, radiology and nuclear medicine, IPKT, radiation oncology, integrated procedures, CSSD, support services (pharmacy satellite), and building support. The first phase of this construction project is the preparation phase, which involves demolishing the buildings located at the redevelopment site. Due to this demolition process, the hospital has developed a plan to relocate the affected medical services, with the following details.

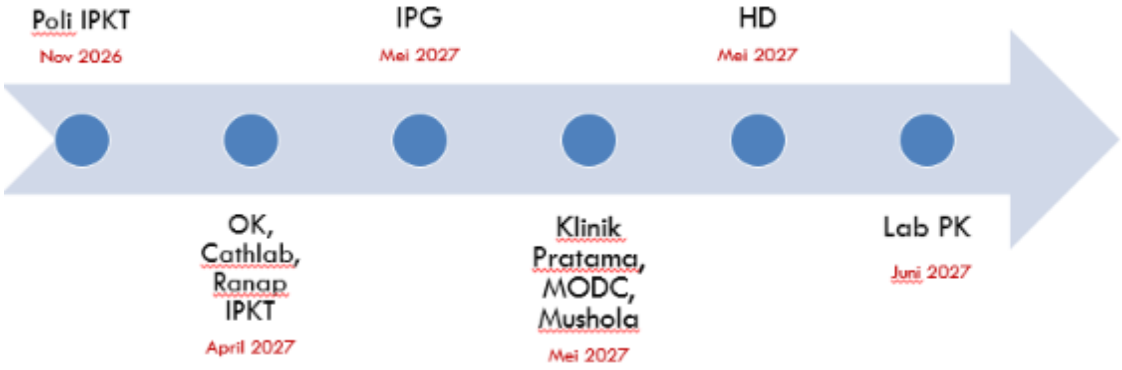
The relocation is scheduled to begin in November 2026 for the IPKT Outpatient Clinic and Procedures to the 1st floor of the IPRJT (Geriatric Clinic). It will then continue in April 2027 for the IPKT Intensive Care, General Inpatient, Cath Lab, OR, and Administration units. The following month, the HD-IPRJT, MODC, prayer room, IPG Building, and Kalinik Pratama will be relocated to different sites. The final relocation will take place in June 2027 for the 1st-floor PK Lab, integrated lab management, and the medical lab department to the Eijkman Building.

The following table provides details of the relocation plan following JCI accreditation in October 2026 for the relocation of Superblock 1 services.

NO	LOCATION	AFFECTED SERVICES	REALOCATION	TIMELINE
1	CMU 1	a. IPKT – Outpatient Clinic and Procedures	IPRJT 1st Floor (Geriatric Clinic)	Nov 2026
		b. IPKT – Intensive Care Unit	IPILB 9th Floor (22 bed) in zone A	April 2027
		c. IPKT – General Inpatient Unit	Building A, 6th floor (class), lantai 5 (non class)	April 2027
		d. IPKT – Cathlab	Kanigara 4 th Floor (1) dan Radiology Departement(1)	April 2027
		e. IPKT – Operating Room	Kanigara 6th floor, IPBT (2 Operating Room)	April 2027
		f. IPKT – Administration	ICTEC Dormitory	April 2027
		g. HD – IPRJT	IPRJT 4 th Floor (formerly the HIV IPT Clinic)	May 2027
2	CMU 1	a. PK Labs on the 1st and 7th floors	Eijkman	June 2027
		b. Integrated Lab Management	Eijkman	June 2027

NO	LOCATION	AFFECTED SERVICES	REALOCATION	TIMELINE
		c. Department of Medical Labs	Eijkman	June 2027
3		MODC	Menara PTC	May 2027
4		Mushola	Masjid Asy-Syifa	May 2027
5		Gedung IPG	Bangunan baru sementara (2 lantai) di area parkir DSSG dan RPK (RPK ke Power House)	May 2027
6		Klinik Pratama	ICTEC	May 2027

Timeline Of Relocation Plan



Annex 8 - List of Hospital SOPs

1. Non-Medical/Domestic Solid Waste Management Procedure
2. Wastewater Management
3. Handling of Medical Hazardous Waste (B3 Waste) in Work Units
4. Cat Control Monitoring and Supervision
5. Emergency Handling of Sharps Waste and Cytotoxic Waste
6. Hazardous Waste (B3 Waste) Storage
7. Handling of Non-Medical Hazardous Waste (B3 Waste) in Work Units
8. Cleaning and Disinfection of Low-Risk Areas
9. Cleaning and Disinfection of Medium-Risk Areas
10. Cleaning and Disinfection of High-Risk Areas
11. Monitoring of Exterior Wall Cleanliness Maintenance for High-Rise Buildings
12. Vending Machine Cleaning
13. Canteen Monitoring and Supervision
14. Supervision of Cleaning Support Facilities
15. Monitoring of Parking Area Cleanliness Maintenance
16. Supervision of Cleaning Service Personnel Grooming
17. Bed Bug Control Monitoring and Supervision
18. Fly Control Monitoring and Supervision
19. Cockroach Control Monitoring and Supervision
20. Caterpillar Control Monitoring and Supervision
21. Submission of Facility and Infrastructure Requirements
22. Hazardous and Toxic Materials (B3) Management Training
23. Monitoring of Corridor Cleanliness Maintenance
24. Monitoring of Garden Cleanliness Maintenance
25. Monitoring of Toilet Cleanliness Maintenance
26. Recyclable Waste Handlin
27. Recall of Safety Boxes and Sharps Containers
28. Linen Sanitation Monitoring
29. Mosquito Control Monitoring and Supervision
30. Transportation of Hazardous and Toxic Materials (B3)
31. Spill Kit Management for Hazardous and Toxic Materials (B3)
32. Procurement and Receipt of Hazardous and Toxic Materials (B3)
33. Procurement of Hazardous and Toxic Materials (B3) Signage
34. Procurement of Safety Data Sheets (SDS) for Hazardous and Toxic Materials (B3)
35. Procurement of Personal Protective Equipment (PPE) for Workers Handling Hazardous and Toxic Materials (B3)
36. Emergency and Disaster Preparedness
37. Fire Extinguisher (APAR) Training
38. Emergency and Disaster Drill Management
39. Assignment of Emergency Response Team (RPK) Duties
40. Preparation of Fire and Emergency Safety Evaluation (FESES)

41. Monitoring of Food and Beverage Processing and Serving Hygiene and Sanitation
42. Rat Control Monitoring and Supervision
43. Fire Protection System Management
44. Management of First Aid Kits and Contents
45. Emergency Response System for Hazardous and Toxic Materials (B3) Incidents
46. Wastewater Sampling
47. Wastewater Self-Monitoring Measurement
48. Field Parameter Measurement for Wastewater Self-Monitoring
49. Blower Operation
50. Submersible Pump Operation
51. Centrifugal Pump Operation
52. Mixer Operation
53. Emergency Response to Wastewater Sump Pit Overflow
54. Emergency Response for Wastewater Management
55. Installation of Rat Traps
56. Larvae Survey Activities
57. Cat Capture
58. Rat Capture
59. Use of Mist Blower
60. Insecticide Mixing
61. Flying Insect Spraying
62. Use of Hand Sprayer
63. Use of Thermal Swing Fogger
64. Use of Mosquito Racket
65. Collection of Sharps Waste
66. Emergency Management of Solid Waste Accumulation
67. Emergency Response for Non-Medical/Domestic Solid Waste Management
68. Use of Fire Extinguishers (APAR)
69. Code Purple (Evacuation) Response
70. Flood Response
71. Code Grey (Security Threat) Response
72. Code Pink (Infant or Child Abduction) Response
73. Code Green (Earthquake) Response
74. Code Red (Fire) Response
75. Code Black (Bomb Threat) Response
76. Procedure for Completing Spill Kit Monitoring Forms
77. Identification of Environmental Aspects and Impacts (IAEI)
78. Monitoring of Temperature, Humidity, and Pressure
79. Environmental Cleanliness Maintenance Mitigation During Heavy Rainfall
80. Occupational Safety and Health (OSH) Incident Reporting and Investigation
81. Hazardous Waste Management
82. Cytotoxic Waste Management

83. Observation, Risk Control, and Documentation of Unsafe Conditions and Behaviors by Work Units
84. Monitoring of Cleaning Activities for Mops, Cleaning Cloths, and Doormats in the Central Sterile Supply Department (CSSD) and Laundry Unit
85. Administration of Work Accident Insurance Claims for Non-Civil Servant Employees (BPJS Ketenagakerjaan)
86. Administration of Work Accident Insurance Claims for Civil Servant Employees (Taspen)
87. Pre-Construction Risk Assessment Procedures
88. Safety Patrol Implementation
89. Internal Audit of the ISO 14001:2015 Environmental Management System
90. Management and Deployment of Cleaning Service Personnel Across All Areas of Dr. Cipto Mangunkusumo National General Hospital (RSCM)
91. Monitoring and Control of Pest Management Activities
92. Corrective and Preventive Action (CAPA) Implementation
93. Cleaning of Mop Cloths
94. Cleaning of Patient Beds and Wardrobes
95. Cleaning of Standard IV Stands (Infusion Stands)
96. Cleaning of Double-Bucket Mop Trolleys
97. Evacuation of Psychiatric Patients During Disasters
98. Hygiene Monitoring in Construction Work
99. Maintenance, Repair, and Quality Testing of Eyewash Stations
100. Management of Occupational Accidents Resulting in Serious Injuries and Mobility Impairments
101. Disaster Evacuation for Patients with Speech Impairments or Communication Disorders
102. Disaster Evacuation for Deaf or Hearing-Impaired Patients
103. Evacuation of Radiotherapy Patients During Disasters
104. Evacuation of Chronic Kidney Disease Patients During Disasters
105. Occupational Accident Reporting System for High-Risk Construction Work
106. Disaster Evacuation for Wheelchair Users and Patients with Mobility Disabilities
107. Disaster Evacuation for Patients with Low Vision or Blindness
108. Disaster Evacuation for Patients with Chronic Illnesses
109. Evacuation of Endoscopy Unit Patients During Disasters
110. Evacuation of HIV and Infectious Disease Outpatient Clinic Patients During Disasters
111. Evacuation of Geriatric Outpatient Clinic Patients During Disaster
112. Evacuation of Infants, Children, Pregnant Women, and Patients with Pregnancy Termination During Disasters
113. Management of Sharps Medical Hazardous Waste (B3 Waste) in the Workplace
114. Cleaning of Wash Basins
115. Monitoring and Control of Disease Vectors and Carrier Animals
116. Recyclable Waste Management
117. Supervision of Recyclable Waste Processing
118. Supervision of Recyclable Waste Disinfection

119. Follow-Up Actions for WWTP (Wastewater Treatment Plant) Effluent Monitoring Results that Do Not Meet Requirements
120. Cleaning of Faucet Spouts
121. Construction Activity K3 (Occupational Health and Safety) Monitoring
122. Sorting Of Solid Waste
123. Fire Prevention During Surgical Procedures
124. Management of Hazardous Waste from Research Activities
125. Use of Elevators for the Medical Rapid Response Team (TMRC)
126. Prevention of Spontaneous Fires in Laundry Services
127. Identification of Compliance with Environmental Laws and Regulations
128. Environmental Quality Monitoring
129. Indoor Air Physical Quality Monitorin
130. Sampling for Monitoring Physical and Chemical Quality of Clean Water
131. Sampling for Monitoring Microbiological Quality of Clean Water
132. Field Measurement of Clean Water Parameters
133. Workplace Environmental Health Surveillance
134. Health Care for Radiation Workers
135. Monitoring Radiation Workers' Doses
136. Radiation Protection in the Integrated Cardioserebrovascular Care Unit
137. Management And Handling Of Materials Containing Asbestos

Annex 9 – E-Waste Management SOP (Plan)

STANDARD OPERATING PROCEDURE (SOP)

ELECTRONIC WASTE (E-WASTE) MANAGEMENT

1. DEFINITION

Standard procedures governing the identification, sorting, collection, temporary storage, transport, and handoff of damaged, expired, or decommissioned electrical and electronic equipment (e-waste) from medical, laboratory, and non-medical units across RSCM to prevent physical, chemical, and environmental hazards.

2. PURPOSE

- Prevent environmental pollution and exposure to Hazardous and Toxic Substances (B3) such as mercury, lead, and cadmium to RSCM staff, patients, and visitors.
- Ensure full compliance with Permen LHK No. 9/2024, Government Regulation (PP) No. 27/2020, and Hospital Accreditation Standards (STARKES).
- Guarantee inventory accountability and full e-waste traceability within RSCM's ESIA documentation.

3. SCOPE & E-WASTE CATEGORIZATION

This SOP applies to all work units, laboratories, inpatient/outpatient wards, support facilities, and administrative offices within RSCM.

E-Waste Category	Hazardous Waste Code (Permen LHK 6/2021 & 9/2024)	RSCM Equipment Examples
Medical & Electrical Lab Equipment	B107d / B351-1	Patient monitors, ECG machines, defibrillators, infusion/syringe pumps, centrifuges, faulty lab analyzers, digital thermometer probes.
Mercury-Containing Lamps & Components	B107d / B321-4	Fluorescent/TL lamps, phototherapy bulbs, UV sterilizer tubes, non-active mercury thermometers/sphygmomanometers.
IT, Telecommunications & Batteries	B107d / B108d	Desktop PCs, laptops, monitors, servers, printers, scanners, UPS units, routers, cables, lithium/UPS batteries.
Domestic Equipment & RS Facilities	B107d	Air conditioners, drug/vaccine storage refrigerators, water dispensers, microwaves, irons, electric fans.

4. CONTAINER SPECIFICATIONS & COLOR-CODING

In accordance with Article 11 of Permen LHK No. 9/2024, e-waste segregation at RSCM must utilize dedicated containers:

- **Black Container (E-Waste Label)**: Designated for damaged/decommissioned electronic gear (PCs, printers, phones, cables, small medical devices).
- **Brown Container (Special B3 Label)**: Designated for B3 hazardous components such as spent lamps, batteries, and mercury-containing parts.
- **Container Specifications**: Containers must be sturdy, leak-proof, fitted with a secure lid, and stored separately from infectious medical waste.

5. STEP-BY-STEP OPERATIONAL WORK INSTRUCTIONS

A. Identification, Technical Assessment, and Asset Decommissioning

1. Initial Identification: Work units/wards identifying non-functional electronic equipment must record item details (Item Name, Brand/Type, Serial Number, Asset Registration Number).
2. Technical Inspection: IPSRS (for medical & facility utility tools) or the IT Team (for computing devices) conducts a technical evaluation.
    - If repairable: Sent for maintenance/repair.
    - If declared *Unrepairable/Scrapped*: IPSRS/IT issues an official *Equipment Damage Certificate*.
3. Asset Decommissioning: The Logistics/Asset Unit issues an Asset Decommissioning & E-Waste Handover Form.

B. Segregation, Packaging, and Labeling at Source

1. Personnel sort e-waste by category (medical/IT/lamps/batteries) and place items into rigid, color-coded containers (**Black** or **Brown**).
2. **Special Handling Rules**:
    - *Lithium & Accumulator Batteries*: Positive/negative terminals must be insulated with non-conductive tape to prevent short circuits and fire hazards.
    - *TL / UV Lamps*: Placed inside cardboard sleeves or specialized lamp cases to avoid breakage.
    - *Data Storage Media (HDDs/SSDs)*: Must undergo degaussing or secure data wiping before disposal.
3. Attach an **E-Waste Hazardous Label** to the container/item detailing:
    - Originating Unit / Ward
    - E-Waste Type & Hazardous Code
    - Handover Date
    - Responsible Officer Name

C. Internal Transport to TPS B3 (Temporary Storage Facility)

1. Internal transport is handled by trained IPSRS / Sanitation OHS personnel using dedicated covered carts.
2. Carts must move via service corridors and service elevators, strictly avoiding patient and public corridors.
3. Internal transport schedules are restricted to off-peak hours (e.g., 05:00–06:30 WIB or 19:00–20:30 WIB).

D. Temporary Storage at RSCM's TPS B3

1. TPS B3 officers verify physical items, weigh total mass, and sign the Internal Handover Form.
2. Officers record the incoming e-waste into the **TPS B3 Entry Logbook**.
3. TPS B3 Storage Facility Requirements:
    - Storage time limits: Maximum **90 days** (for waste >50 kg/day) or **180 days** (for waste <50 kg/day).
    - Segregated storage layout using interlocked racks per category.
    - Facility must feature adequate ventilation, smoke detectors, CO_2/Powder fire extinguishers, B3 spill kits, and emergency eyewash/shower stations.

E. External Transport and Licensed Third-Party Processing

1. RSCM Sanitarians verify valid licenses of third-party vendors (Transporter B3 permit from the Ministry of Transportation and E-Waste Processor permit from KLH).
2. Handover from TPS B3 to vendor trucks includes joint weighing and documentation verification.
3. Personnel log and confirm real-time movement using KLH's electronic manifest system (**Festronik**).
4. Third-party vendors must provide a *Certificate of Destruction* (COD) or Proof of Utilization within 14 business days post-transport.

6. RESPONSIBILITY & AUTHORITY MATRIX

Work Unit / Role	Primary Responsibilities
Work Unit / Wards	Initial identification, source segregation, submitting decommissioning requests.
IPSRS & IT Team	Technical failure evaluation, data media degaussing, hazardous component dismantling.
Logistics & Assets	Administrative asset verification, updating state asset ledgers.
Sanitation & OHS Unit	TPS B3 safety oversight, logbook logging, third-party transport supervision, Festronik issuance.
RSCM ESIA Team	Annual e-waste data consolidation, environmental compliance reporting to KLH/DLH.

7. EMERGENCY RESPONSE PROCEDURES

A. Mercury Lamp (TL/UV) Breakage

1. Isolate the area; evacuate staff and patients within a minimum radius of 3 meters.
2. Clean-up staff must wear full PPE (N95/activated carbon mask, nitrile gloves, safety goggles).
3. Carefully scoop up glass shards using thick cardboard (never use standard vacuum cleaners).
4. Place shards and mercury residue into a sealed container labeled "Broken Mercury Waste."
5. Neutralize the area with sulfur powder if liquid mercury spills occur.

B. Lithium Battery / UPS Fire

1. Immediately disconnect main power sources if safe to do so.
2. Use **Class C Fire Extinguishers (CO_2 or Dry Chemical Powder)**. Never spray water directly onto burning lithium batteries.
3. If dense toxic smoke develops, trigger the building alarm and alert the Emergency Response Team.

8. REPORTING, EVALUATION, AND ESIA AUDITING

1. **Monthly Reports**: The Sanitation & OHS Unit records and aggregates monthly e-waste weights and units.
2. **External Reporting**: Sanitarians/OHS submit e-waste performance reports **at least once a year** to the Environmental Agency via SIPSN or KLH's SIMPEL system.
3. **ESIA Audit**: The RSCM ESIA Team conducts bi-annual audits of this SOP to evaluate Environmental Key Performance Indicators (KPIs).

APPENDIX EXAMPLE: INTERNAL E-WASTE HANDOVER FORM

1. E-Waste Item Handover Table

No.	Item Type / Name	Brand / Model	Quantity	Condition / Status
1				Total Damage / Scrap
2				Total Damage / Scrap
3				Total Damage / Scrap

2. Handover Information

Information	Details
Day / Date	
Room / Originating Unit	

3. Handover Verification

Stage	Name / Position	Signature
Handed Over By (Work Unit)		
Verified By (IPSRS/IT)		

Stage	Name / Position	Signature
Received By (B3 TPS Officer)		

4. Document Approval Sheet

Prepared By	Reviewed By	Approved By
Head of K3RS & Environmental Sanitation Team	**Head of IPSRS / Head of Facilities Division**	**President Director of RSCM**
Name:	Name:	Name:
Date:	Date:	Date:
Signature: _____	Signature: _____	Signature: _____