

CITY PROFILES

March 2020

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Bandung, Indonesia

City Profile

Area: 1756.7 km²

Population: 2,481,469 (2015)

About the city:

Bandung is the capital of West Java province, which is an attractive city with fast-growing economy and fast expanding its metropolitan region in the province. Bandung lies at the center of the Bandung Metropolitan Area and also is the capital of West Java province. Bandung is famous for its cool climate, lush greenery, active art scene and numerous fashion outlets.



**Bandung Resmi Kota Bangun
(in Indonesian)**

<https://portal.bandung.go.id>

Major problems and areas need solutions



Waste Management

Solid waste management is critical for the welfare of Indonesia's rapidly growing urban population and the country's economy and tourism sector. Improving solid waste management in the cities adjacent to rivers has become increasingly important to address municipal solid waste (MSW) management. The government has placed solid waste management increasingly high on the national, regional and local city agenda.

<Solution Needed>

Decentralized/Distributed (district-based) organic waste processing plant with low cost, appropriate technology and limited space.



Copy right: IGES



Smart City Development

Bandung city has been in the forefront of Smart City Movement in Indonesia, having revolutionized the way it is administered, managed and planned. A long list of smart city administration and reporting system have been launched, and hundreds of apps have been developed to support these systems, with hundreds more in the pipeline.

Strategies/master plan for sustainable cities

Vision

Towards Excellence, Livable, and Prosperous City

Master Plan for Urban Development

- 1) Smart City Kampung/Village
While Bandung is poised for a progressive smart city transformation, the involvement of the vast majority of urban population living in mid-low income "Kampung" or urban village has proved to be a challenge.
- 2) Public Participation on City Planning through E-Musrenbang
The city has invested a lot and put much effort to develop an online-based participatory planning system or "E-Musrenbang". This system which is designed as an inclusive planning system offers huge potential in empowering citizen to be participate in the developing process of the city planning.



Project Information

Legok Nangka Regional Waste Management and Processing Sites PPP Project (Preparation Stage)

Legok Nangka Regional waste management and processing sites was built to facilitate the solid waste processing in Bandung Metropolitan Area (Bandung City, Cimahi City, Bandung Regency, West Bandung Regency, Sumedang Regency and Garut Regency). The project aims (a) to improve the sanitation and health of the district/city and (b) to achieve the transfer of at least 85% of waste that has been proceed from landfill. The government is targeting the waste and processing project to be operate in 2022.

<http://kpbu.djppr.kemenkeu.go.id/en/proyek/construction-of-legok-nangka-regional-waste-management-and-processing-sites-tempat-pengolahan-dan-pemrosesan-akhir-sampahtppas/>

World Bank: High Speed Railway (HSR) system (On-going, under construction)

There is emerging recognition of a mega-urban region stretching from coastal Jakarta to Bandung (Firman, 1995; Dorodjatoen, 2009). This urban region taking in Greater Jakarta (JABODETABEK: Jakarta, Bogor, Depok, Tangerang and Bekasi) and the BMA was home to 38.1 million people in 2015. The region will benefit further from a new high speed rail link between Jakarta and Bandung which will sharply reduce travel times along the 150km route to 40 minutes, as compared to the present three hour journey. A consortium of Chinese and Indonesian state-owned companies was appointed to oversee the new line’s development and the construction of the new line began in January 2016 and on an expected opening in 2022.

<https://ppi.worldbank.org/en/snapshots/project/jakarta-bandung-high-speed-railway-9302>

World Bank Project to Clean Up Citarum River (On-going)

The Citarum Harum program includes efforts to address trash, sedimentation and flooding. The World Bank loan would be used specifically for addressing the trash problem. The project will focus to help change the residents’ lifestyle to provide a long-term solution to the trash problem by providing better education in people’s home especially who lived in the riverbank and catchment areas.

<https://www.worldbank.org/en/news/press-release/2019/12/05/cleaning-up-indonesias-urban-solid-waste>

JICA Partnership Project: Waste Management Support Project toward a Sustainable Resource Recycling Society in Bandung, Indonesia (March 2017- March 2020)

This project is conducted by Institute for Global Environment Strategy (IGES), Japan Environmental Sanitation Center (JESC), and Kawasaki Environment Research Institute (KERI) in close collaboration with local stakeholders. The project aims to promote actions for building a sustainable resource recycling society by properly conducting the 3Rs through capacity development of residents and businesses, and by improving capacity for proper separation of organic and non-organic wastes to recycle them.

ADB RETA 9170 Promoting Smart Systems in ADB's Future Cities in the Asia Pacific Region (December 2015 – April 2018)

The project developed urban diagnostic for Bandung City and Kampung Smart Systems to integrated data systems that widen the communication channel that enable locals to directly participate in the city planning process through E-Musrenbang. The hub, called E-mah warga, has two ways to facilitate data capturing from grass root level data and provide information on government programs, subsidies, employment opportunities to the community. The other visual data platform called ur-space, a tool, enhances the quality of decision-making process by helping decision-makers to verify the real situation, assess it in relation to sectoral and larger development plan and strategies, and validate it with relevant geo-located statistic figure.

<https://www.adb.org/sites/default/files/project-documents/49053/49053-001-tcr-en.pdf>

Bangkok, Thailand

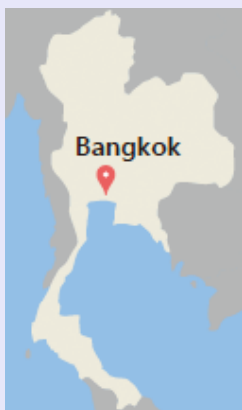
City Profile

Area: 1,568.737 km²

Population: 5,676,648 (2018)

About the city:

Not only known as the most populous city in Thailand, Bangkok is also picked as one of the world's top tourist destination. Historical and cultural attractions such as Royal Palace and Buddhism temples, with wide range of choices for shopping and dining experiences has made multi-faceted sight in this city.



Bangkok Metropolitan Administration

<http://www.bangkok.go.th/main/index.php?&l=en>

Major problems and areas need solutions



Smart City Development

Unclear roles among the institutions which involved in smart city project is a challenge.

<Solutions needed>

Integrated collaboration and cooperation system between stakeholders in both government agencies and private sectors.



Transportation

<Solutions needed>

- Improvement of city transportation network system.
- Development of public infrastructure facilities.

Strategies/master plan for sustainable cities

Bangkok, the capital city of Thailand, is a metropolis of nearly 6 million residents and about 4 million commuters. It is the nation's administrative center; the innovation and education center. It is the country's most important logistics hub, ranging from land to water and air transport. Due to Bangkok's significance, it is expected to be transformed into an all-rounded sustainable city. The Bangkok Metropolitan Administration, consequently, has implemented the 20-year Bangkok Development Plan (2013-2032) which aims for excellence in public services and urban development in 7 aspects: (1) Safe metropolis, (2) Green and convenient metropolis, (3) Metropolis for all, (4) Compact metropolis, (5) Democratic metropolis, (6) Economic and learning metropolis and (7) Management strategy.

Priority SDGs



Project Information

JICA: The Project of Smart Transport Strategy for Thailand 4.0 (2018-2023)

Smart Transport Strategy for Thailand 4.0 aims to realize better quality of life and low-carbon society based on smart transport strategy supported by cyber technology. The Sukhumvit Model is an urban experiment aiming to achieve "Economy for the people" (Thailand 4.0) with "No one left behind" (SDGs). It shifts the focus of transport policy from infrastructure development (road or railway) to the needs of diverse citizens, young or old, male or female, rich or poor, etc. For a better lifestyle, AI will be used to develop a system enabling seamless selection and combinations of time, mode and route of transport such as walking, personal mobility and railway.

JICA: The Project for Comprehensive Conversion of Biomass and Waste to Super Clean Fuels by New Solid Catalysts/2017.8-2022.8 (2017-2022)

This JICA-JST project aims to develop production technology of alternatives to fossil fuel using biomass waste resources such as wood, farm outputs, waste systems.

https://www.jst.go.jp/global/english/kadai/h2805_thailand.html

ADB: Thailand: Bangkok Mass Rapid Transit South Purple Line Project (2017 - 2021)

The outcome of the project will be urban transport system in Bangkok improved. The outputs of the project will be (i) Bangkok mass rapid transit (MRT) South Purple Line constructed and operational, and (ii) capacity in implementing and managing urban rail MRT system strengthened.

<https://www.adb.org/projects/51048-001/main>

ADB: Thailand: Bangkok Mass Rapid Transit Project (Pink and Yellow Lines) (2016 – 2020)

The Pink and Yellow Line projects are feeder lines to diversify the transport modality of the city, and to feed passengers to the main MRT lines, in particular those that connect to Bangkok's Central Business District. The projects will mitigate traffic congestion and associated environmental issues, provide convenient and cost-effective public transportation system, and reduce the government's fiscal burden. The projects are parts of the government's stimulus measures to improve infrastructure which is an essential part of the country's sustainable development.

<https://www.adb.org/projects/51274-001/main>

JICA: Mass Transit System Project in Bangkok (Red Line) (III)/2016.9 (2016-2020)

This project will construct a new, large-capacity railroad called the Red Line (26 kilometers elevated/at-grade with 10 stations) that connects Bang Sue in Bangkok with Rangsit to the north, addressing the demand for transportation in the Bangkok Metropolitan Region, alleviating traffic congestion, and reducing air pollution.

JICA: Technical Cooperation for Development of clean and efficient utilization of low rank coals and biomass by solvent treatment project /2013.12-2019.1 (2013-2018)

This project aimed to achieve efficient dewatering and upgrading of low-grade carbon resources by treating them with solvents under mild conditions of about 350 degree Celsius and 2 MPa, and to manufacture useful products from the clean materials that are produced by the solvent treatment. Making this new technology available would enable techniques for efficient use of low-grade fossil resources and biomass to be widely adopted throughout the world. Lignite and rice straw are low-grade materials with only 45% to 70% carbon.

ADB: Thailand: THA: BLCPP POWER PROJECT (2003 - 2011)

The Project is a 1,434 MW coal-fired thermal power plant located at Map Ta Phut, Rayong Province, approximately 200 kilometers southeast of Bangkok. The Plant is a two unit pulverized coal-fired, steam-electric generating station operated by BLCPP Power Limited (Project Company). The net power produced by BLCPP is fed to the Plant's 500 kV switchyard through which the electricity will be sold to the national utility and transported through the national grid.

<https://www.adb.org/projects/37904-014/main>

Barisal, Bangladesh

City Profile

Area: 58 km²

Population: 328,278 (2011)

About the city:

The city of Barisal is one of the biggest river ports in Bangladesh. The city is fast growing city of the country stands on the Kirtankhola River. The city is called the "Venice of the East" or the "Venice of Bengal."



Barisal City Corporation

<https://www.facebook.com/BaridalCityCorporation.Bsl/>

Barisal City Cooperation on Banglapedia

http://en.banglapedia.org/index.php?title=Barisal_City_Corporation

Major problems and areas need solutions



Waste management

Open burning and dumping is the current ways to treat municipal wastes. New landfill site is necessary to meet the increasing volume of waste. Basic data of wastes for better planning is now lacking. Barisal City Corporation is in charge of municipal waste management.

<Solutions needed>

- Development of infrastructure for better waste management such as sanitary landfill, composting and recycling
- Development of human and financial capacity



Smart City Development

Seventy to eighty percent of the citizens have smart phones, and there is a need for e-government to improve administrative services. However, ICT infrastructure is still enough to promote the initiative.

<Solutions needed>

- ICT infrastructure for the city's line department
- E-government establishment with proper technical and financial assistance

Strategies/master plan for sustainable cities

1) Child friendly initiative in urban planning

Barisal City Corporation has a vision that Barisal City will be a child friendly, pollution free, beautiful city where all citizens will enjoy healthy lives and contribute to national achievement in realizing SDGs by the year 2030.

2) Urban primary health care services delivery project by Barisal City Corporation

To provide primary health care services to the urban population, especially for the urban poor and 30% of all services will be provide fully free to the urban poor.

3) Climate change adaptation project by Barisal City Corporation

- To build up awareness among the people regarding resilient city
- To develop capacity of city officers/staff to prepare resilient design, infrastructure, projects and its implementation.
- To make the city inclusive, safe, sustainable, environment friendly and resilient city by the year 2026

Priority SDGs



ADB: Bangladesh: Southwest Transmission Grid Expansion Project (2017 – Ongoing)

The project is expected to improve the operational performance of the power sector and contribute to the Government of Bangladesh's target to achieve electricity for all by 2021 through (i) constructing (a) a 400/132-kilovolt (kV) substation at Gopalganj; (b) a 230 kV transmission line in the southern zone, from Barisal to Faridpur; and (c) a 400 kV transmission line in the western zone, from Bogra to Rohanpur; and (ii) implementing a capacity development program in the electric utility industry to promote socially and gender inclusive growth. The project will use state-of-the-art conductors with higher power transmission capacity and lower energy loss in both the 230 kV and 400 kV transmission lines [Construction work for energy infrastructure].

<https://www.adb.org/projects/51137-001/main>

ADB: Sustainable Rural Infrastructure Improvement Project (2010 – Ongoing)

Investment in rural infrastructure includes (i) developing all-weather upazila (administrative unit subdivision of a district) roads to provide access to and from growth center markets (GCMs), (ii) improving union and village roads to provide rural people better access to markets and social services, and (iii) improving the infrastructure of GCMs to make trading more efficient.

<https://www.adb.org/sites/default/files/linked-documents/40515-01-ban-dc.pdf>

ADB: Bangladesh: Urban Public and Environmental Health Sector Development Program (Program Loan) (2009 – Ongoing)

This project assists Bangladesh to improve the living standards of city dwellers, especially the poor. The project will help reduce child mortality and morbidity by decreasing the prevalence of waterborne and food-related diseases in six cities - Barisal, Chittagong, Dhaka, Khulna, Rajshahi, and Sylhet. It will improve waste management and food safety regulation, and strengthen institutions.

<https://www.adb.org/projects/39305-013/main>

JICA / Barisal Division: 5 Meteorological Radars Construction (BMD) (1988-2010)

Construction of meteorological radars.

MOEJ: Solid Waste Management and Sanitation in Eight Secondary Towns in Bangladesh (2005)

A small scale project based on providing the tools for slum dwellers to manage their own organic waste by composting.

https://www.env.go.jp/recycle/3r/en/asia/02_03-3/06.pdf

JICA: Bheramara-Faridpur-Barisal Transmission Line Construction Project

Infrastructure development to build electric network to guarantee stable power supply.

JICA: Goalpara-Barisal Transmission Line Project

Infrastructure development to build electric network to guarantee stable power supply.

Water Sanitation for the Urban Poor Project in Barisal (Project timeline is not available — General issues, not project in and of itself):

<https://www.wsup.com/where-we-work/bangladesh/barishal/>

Cebu (Metro Cebu), Philippines

City Profile

Area: 315 km²

Population: 922,611 (2015 census)

About the city:

The city of Cebu is the center of Metro Cebu and the second largest Metropolitan after Manila. As the oldest city and the first Spanish settlement in this country, Cebu City is colored by Spanish and Roman Catholic culture. Combining with wonderful panoramic of mountainous site and harbor areas, this city has become main tourism point of the country.



Metro Cebu

<http://www.cebucity.gov.ph/>

Major problems and areas need solutions



Waste management

<Solutions needed>

- Additional personnel with the technical knowledge on effectively addressing the gaps in solid waste management programs.
- Development of better facilities and technology for a more efficient segregation and recycling programs.
- Increase information campaign for a more aggressive involvement of the public regarding waste management.



Disaster Risk Reduction

<Solutions needed>

- Development of warning system facilities especially for the Cebu City Command Center.
- Additional skills-training seminar and workshops for all the personnel in charge of responding to emergency calls throughout the city.

Strategies/master plan for sustainable cities

Cebu Green City

The city government of Cebu aims to be a 'Green City' in the next three years with these following master plan:

- 1) Launching of "Kakahuyan Alang Sa Kaugmaon" program in which the city intends to plant three million seedlings in the next three years as its contribution to fight against climate change.
- 2) Improving the solid waste management program through a more efficient garbage collection and segregation.
- 3) Intensive and massive river cleanup campaign.
- 4) Expanding the socialized housing programs to discourage illegal squatting along riverbanks and other urban areas.

Priority SDGs



Project Information

JICA: Promotion of School Disaster Risk Reduction and Management in Cebu (2017-2020)

The pilot schools in Cebu are part of a Project Information, "Promotion of School Disaster Risk Reduction and Management in Cebu Province" with support from Japanese non-profit group SEEDS Asia, the Department of Education (DepEd) Office for Disaster Risk Reduction and Management Service (DRRMS), DepEd Region 7, Japan's Hyogo Prefectural Board of Education, and JICA.

GGGI: Mainstreaming Green Growth in Development Planning (2016-2020)

The overall outcome of the project is to support the government in ensuring that green growth is incorporated into national and provincial development planning. This will be done by piloting green growth guidelines in selected NDPs, as well as in the PLTVs. This will facilitate the improvement of the guidelines for adoption and the development of a replication plan in order to scale up the use of the guidelines. To achieve this, the project will deliver the following outputs: 1) Recommendations on mainstreaming green growth into the NDP developed and submitted to government, 2) Recommendations on mainstreaming green growth into the PLTV for two provinces and submitted to government, and 3) Guidelines on mainstreaming green growth into development planning finalized and submitted to government, along with a replication plan to scale up its use.

ADB: Mactan-Cebu International Passenger Terminal Project (2014-2020)

The Project involves the expansion of passenger terminals at Mactan Cebu International Airport (MCIA) (the Project), a priority PPP project of the government. This airport is the second largest airport in the Philippines and serves as the southern hub of the air transportation system in the country. MCIA is located on Mactan Island, Cebu Province, and Central Visayas region. The components of the Project include (i) construction of a new passenger terminal; (ii) rehabilitation of the existing terminal; (iii) construction of an apron for the new passenger terminal; and (iv) operation, maintenance; and management of the new and old passenger terminals. Upon completion, the project will increase the capacity of the airport to 8 million passengers annually. At present the existing terminal building, which has a capacity of only 4.5 million passengers annually, has been operating at over-capacity with almost 7 million passengers going through the terminal in 2013.

<https://www.adb.org/projects/48271-001/main>

JICA: The Project for Capacity Development on Improving Solid Waste Management through Advanced/Innovative Technologies. Quezon City, Davao City, Cebu City (2017-2018)**JICA: Preparatory Survey for Septage Management Project in Cebu (2017-2018)**

JICA assisted Cebu City in its wastewater management by sharing a patented technology from AMCON Inc., a Japanese small and medium enterprise. The technology, a volute dewatering press, will help treat wastewater from septic tanks efficiently and at low costs.

JICA: Project on Master Plan Study and Institutional Development on Urban Transport System in Metro Cebu (2017-2018).

The objective of the Project was to develop an urban transport master plan for Metro Cebu to be approved by relevant authorities while enhancing the capacities of Metro Cebu Development Coordinating Board (MCDCB), related Local Government Units and departments in urban transport planning.

Colombo, Sri Lanka

City Profile

Area: 37.31 km²

Population: 752,993 (2011)

About the city:

Colombo is the capital and most populous city in Sri Lanka. Base for majority of Sri Lankan corporation and the highest contributor of the country's economy.

Colombo is inhabited by numerous ethnic groups and surrounded by many canals and river delta in the northern and north-eastern border of the city.



Colombo

<http://www.colombo.mc.gov.lk/>

Major problems and areas need solutions



Waste management

Colombo's landfill site is located at Aruwakkalu, 180km away from city center and temporarily suspended. It is proposed to install two incinerators, having capacity of 8-10 MT per day to treat animal waste generated at slaughterhouses and meat stalls. Colombo City government spends a lot of budget on the land use in neighboring city and waste transportation. The city is also planning to build Waste to Energy Plant.

<Solutions needed>

- Development of waste management technology for both household and industrial waste through technology transfer program

Priority SDGs



Project Information

JICA: Project for Establishment of Light Rail Transit System in Colombo

The objectives of the Project are to alleviate traffic congestion, provide better connectivity and mitigate air pollution in the Western Region by constructing mass rapid transit system, thereby contributing to the economic and social development of the Western Region and improvement of urban environment.

https://www.jica.go.jp/english/news/press/2018/20190311_01.html

Da Nang, Vietnam

City Profile

Area: 1,285.4 km²

Population: 1,134,310 (2019)

About the city:

As the fifth-most populous city in Vietnam, Da Nang has the highest urbanization ratio. Located in the center of Vietnam, Da Nang is the vital port city and the gateway to the Pacific Ocean and towards Laos, Thailand, and Myanmar.

The city of Da Nang is crossed by several UNESCO World Heritage Sites in Vietnam.



Da Nang

<https://danang.gov.vn/web/en/>

Major problems and areas need solutions



Waste management

<Solutions needed>

- Development of waste separation technologies.
- Development of waste treatment technologies (Waste to Energy technologies; incinerators technologies).



Smart City Development

Focusing on 6 major pillars with about 67 projects to be implemented from 2019-2025, Da Nang Smart city will include these following elements:

- Smart Governance (public service, intelligent operation center, open data)
- Smart Economy (smart tourism, smart commerce, smart agriculture)
- Smart Living
- Smart Citizen
- Smart Transport (Intelligent transport system)
- Smart Environment



Energy

<Solutions needed>

- Technology development for monitoring and controlling the actual energy consumption from public lighting.



Transportation

<Solutions needed>

- Development of public infrastructure facilities and low-carbon transportation system.
- Optimization technology and Internet of Things.

Strategies/master plan for sustainable cities

1) Master Plan 2020-2030 and vision to 2045

This master plan will focus on four areas: (1) Logistic, (2) High Technology, (3) Tourism, and (4) Ocean economy. The projects which is being implemented are:

- Intelligent Operation Center
- Upgrading Da Nang Data Center
- Wireless MAN Network
- Data warehouse and smart data analytics
- Urban spatial data infrastructure on GIS
- Intelligent traffic management
- Environment monitoring system
- Security monitoring system
- Tourism monitoring system
- Smart public lighting system
- Pilot smart district model at Lien Chieu District

2) Da Nang Smart City Master Plan for period 2018-2025, towards 2030

In 2030, Da Nang becomes the smart, livable and sustainable city with citizen – centric strategy, delivering high quality of life and sustainable environment for citizens while ensuring economy growth and competitiveness. It has three specific goals: (1) ICT-based infrastructure and data base in 2020, (2) ICT-based services in 2021-2025, and (3) Green entrepreneurship and innovation in 2030.

Priority SDGs



Project Information

ADB: Water Sector Investment Program (2013-2020)

The investment program will help water supply companies in Viet Nam to improve their performance/ It will support capital investment in water companies and co-finance the National Nonrevenue Water (NRW) Program. The Program will utilize an MFF to provide longer-term support for institutional reform in Viet Nam water sector until 2020. The MFF will be used as seed money to leverage parallel co-financing and, importantly, gain access to commercial finance and increased private sector participation.

Fiji (Country)

Country Profile

Area: 18,274 km²

Population: 884,887 (2017)

About the country:

Fiji is an island country in the south of Pacific Ocean. Consisted of about 330 islands which one of third are permanently inhabited. The islands are mostly formed by volcanic / geothermal activity that is still active now. Rich of forest, mineral, and fisheries resources, fabulous tropical island scenery, and indigenous Fijian or Indo-Fijian make Fiji known as the heart of South Pacific and home to the happiness.



Fijian Government

<https://www.fiji.gov.fj/Home>

Major problems and areas need solutions



Waste management

Waste management is a very expensive activity for the city and there is only one land fill catering for all the waste in the region.

<Solutions needed>

- Assistance in technology development for waste management
- Development on waste management system (low operational and maintenance cost)



Energy

<Solutions needed>

- Development of energy efficient or renewable technology to support transportation system
- Implementation of the internet of things (IoT) to improve traffic movement, monitoring and safety

Strategies/master plan for sustainable cities

- Strategic Spatial Master Plan (in the development stages)
- Integrated Transport Master Plan (still in the concept discussion stage)

Those two masterplans aim to:

- 1) Determine determining the location, size and boundary of the urbanized area for Viti Levu by examining the major transport connectivity within mainland and to the surrounding outer islands.
- 2) Ensure balanced, integrated transport system development; provide efficient mobility services; reduction of adverse effects – social and environmental.

Priority SDGs



JICA: The Project for Promotion of Regional Initiative Solid Waste Management (J-PRISM) (2010-2015)

Over the several decades, waste management has become a major concern for small island countries in the Pacific region as poorly managed waste has the potential to cause negative impacts on national development activities, including tourism and trade, food supplies, public health and the environment. Expected Outputs: 1) Each member country has implemented identified priority strategies harmonized with the Pacific Regional Solid waste Management strategy to realized solid waste management in areas including sustainable financing, integrated solid waste management, legislation, awareness, communication and education, environment monitoring, policy, planning and performance and; 2) Advance cross border and region wide improvement of solid waste management and enhanced regional and national policy capacity for sustainable solid waste management.

JICA: The Project for Strengthening Community-based Disaster Risk Management (2010-2013)

The National Disaster Management Office is in-charge of issuing evacuation alerts based on the meteorological monitoring data, but they could not predict flooding in specific areas and rivers. The lack of disaster response manuals or training on how to respond to emergencies was also a problem and this led to inadequate collaboration between agencies in the event of disaster. It was under such circumstances that the Government of Fiji issued a request to the Government of Japan pertaining to the Strengthening of Community-Based Disaster Risk Management Project in the Pacific Region. In response to this, the Government of Japan consigned JICA to implement the detailed plan formulation study from March to April 2010 to reach an agreement on the Project contents with the Government of Fiji and later signed the Record of Discussion in August 2010.

JICA: The Project for Operation of Seismic Observation Network in Fiji. Implemented by: National Disaster Management Office, Fiji Meteorological Service Centre, Water Authority of Fiji (2007-2011)

The National Seismograph Network of Fiji was upgraded in 2003 from analog VHF radio telemetry to a new VSAT system by JICA for the purpose of enhancing capacity of monitoring earthquakes and tsunamis in the country. The satellite telemetry system should be well maintained throughout its lifespan of 20 years. The new Fiji seismic network however has some problems in equipment (seismometer, power supply, etc.), site conditions and network coverage and density, which prevent to fully utilize the advanced functions of the VSAT system. The operations should also be well trained for maintenance and data analysis for the purpose of the network. This project was also implemented in Tonga. Expected Outputs: 1) The earthquake observation network is stably operated. 2) The performance of earthquake observation is enhanced. 3) Analyzing capability of observation data is enhanced.

Lalitpur, Nepal

City Profile

Area: 15.43 km²

Population: 284,922 (2015)

About the city:

Lalitpur City is located in the South-east of Kathmandu and one of the three major cities in Nepal. The rich cultural heritage and architecture has made Lalitpur is best known as the city of festival, ancient art, and stone carving statue. Its economic lay on trades, service industries, and some in agriculture.



Lalitpur Metropolitan City

<http://lalitpurmun.gov.np/en>

Major problems and areas need solutions



Waste Management

<Solutions needed>

- Development of waste management system (land fill)
- Development of waste management technology
- Support to improve human-capacity



Disaster Risk Reduction

Located in disaster prone area, Lalitpur has suffered severe damages due to earthquake on last 2015

<Solutions needed>

- Development of appropriate disaster mitigation system



Transportation

<Solutions needed>

- Development of traffic management system

Strategies/master plan for sustainable cities

Integrated Urban Development Program (IUDP)

The vision is holistic development of city with equal access and opportunity for all irrespective of gender and socioeconomic. The plan will address, social and physical infrastructure, transportation, waste management, institutional development, disaster resilience and governance, and etc. IUDP is an integrated plan for 5 years and covers sectors like social and physical issues.

Priority SDGs



Project Information

JICA: Project for Hydro-microbiological approach for water security in Kathmandu Valley, Nepal (Lalitpur) (2014-2019)

Taking account of the fact of recent population growth, it was predicted that water demand gap would be widened and that water quality in the Kathmandu valley would be deteriorated further in the future. Improvement of water supply both in quantity and quality is an urgent issue for Kathmandu valley. Aiming at achieving 93% of basic water supply service and 85% of sanitary service, water and sanitary service was a prioritized in the 13th approach paper (2013/14 – 2015/16), which is the prime development strategy of the government of Nepal. Moreover, it set, in the national water plan 2005, a target of providing trustworthy water supply and sanitary service for the entire citizen by 2017. Thus, this project's objective was in line with the direction in development policy of the government of Nepal.

Makassar, Indonesia

City Profile

Area: 199.3 km²

Population: 1,769,920 (2017)

About the city:

Makassar is the capital of the Province of South Sulawesi, Indonesia. It is Indonesia's fifth largest city. The city is strategically located at the intersection between East and West Indonesia as well as between Asia and Australia.



Government of Makassar

(in Indonesian)

<http://makassarkota.go.id/>

Major problems and areas need solutions



Smart City Development

Real time data processing project: With its existing 3000 CCTV network, the city is interested in building a real time data processing center in the city. In addition, the city faces the shortage of electricity too (connected to the next project).

<Solutions needed>

- The CCTV has a capacity of monitoring around 1km distance space. However, in Makassar, it is used only for 400m range. Hence, they can collect much clearer visions by the CCTV, compared to the ones deployed in 1km interval. However, as the city lacks the data processing capacity, those collected data has not been fully utilized yet.
- It is necessary to ask companies to build the data processing center in Makassar.



Waste Management

Makassar is working on a waste-to-energy project. It was requested by the Presidential Degree that each local government should make at least one power plant. Hence, all Indonesian cities need to do so.

<Solutions needed>

- The city will build the waste to energy plants in the main island and 15 surrounding islands—which will be connected to the mainland. This will create an energy supply network and address the current shortage, which happens sometimes. The city is organizing a large gathering of mayors in Indonesia to join the sounding tests, inviting all private companies interested in investing in the waste to energy project.
- The city is organizing a large gathering of mayors in Indonesia to join the sounding tests, inviting all private companies interested in investing in the waste to energy project.

Strategies/master plan for sustainable cities

Makassar Smart City With 3C Concept: Clean, Comfort, Continuity

Makassar aims at becoming a livable city with friendly and smart technology, which can be customized for local needs.



Project Information

ADB: Regional: Revitalization of Informal Settlements and their Environments using a Water-Sensitive Approach (October 2018–December 2020)

The proposed knowledge and support technical assistance (TA) supports the piloting of an approach and technology for the proposed Revitalization of Informal Settlements and their Environments using a Water Sensitive Approach (RISE) project. Pilots will be undertaken in Makassar City, Indonesia and in the Greater Suva Area, Fiji. In line with ADB's existing knowledge partnership with the Cooperative Research Centre for Water Sensitive Cities (CRCWSC), the piloting represents the first adaptation of CRCWSC's water-sensitive approach to infrastructure in a development context. The technology aims to demonstrate the effectiveness of a water-sensitive approach which uses decentralized, green infrastructure to biologically treat contaminated and polluted water, and in doing so improve the environmental quality and health of the community. Experiences and lessons from the demonstration activities undertaken through the TA are expected to inform technical design, implementation arrangements and cost estimates for the proposed RISE project.

<https://www.adb.org/projects/51290-001/main>

ADB Indonesia: Sustainable Infrastructure Assistance Program - Capacity Development for the Metropolitan Sanitation Management Investment Project (Subproject 6) (Supplementary) (2010-2015)

The Project aimed to provide improved urban wastewater services in the cities of Cimahi, Jambi, Makassar, Palembang, and Pekanbaru in the Republic of Indonesia. These cities lacked any piped sewerage and wastewater treatment facilities. The Project was expected to respond to the needs of urban communities, including low-income households, by constructing new separate sewerage systems and wastewater treatment plants (WWTPs), setting up local wastewater infrastructure management institutions and strengthening the relevant departments of respective regional governments.

<https://www.adb.org/projects/46380-002/main>

<https://www.adb.org/projects/43251-025/main>

Mandaue (Metro Cebu), Philippines

City Profile

Area: 34.87 km²

Population: 362,654 (2015)

About the city:

Mandaue City is the highest urbanized city in Cebu Island and home for world class companies and a focal point of manufacturing of the country. It is known as 'Bridge City' because it is connecting Cebu Island and Mactan and the only main get to enter Cebu Island.



Mandue City

<https://www.mandauecity.gov.ph/>

Major problems and areas need solutions



Waste management

<Solutions needed>

Development of community-based waste treatment:

- Composting technology for bio-waste
- Livelihood and incentive programs for waste diversion
- Community-based garbage collection and disposal system



Transportation

<Solutions needed>

- Development of traffic management and public transportation system:
 - ✓ Roads system
 - ✓ Pedestrian and cycling facilities
- Development of transportation infrastructures (including road and bridge)

Strategies/master plan for sustainable cities

The Mandaue's strategies for sustainable city now focus on "Building a Resilient Mandaue with Urgency to address Climate Risk to Protect the Community's Well Being" in close link with the following master plans below.

- 1) City Land Use Plan
- 2) City Development Plan for the sectoral plan
- 3) Low Carbon Model Town Study –APEC Energy Smart Communities Initiatives
- 4) Master City Drainage Plan

Priority SDGs



Project Information

JICA: Cebu-Mactan Bridge and Coastal Road Construction Project (Project timeline is not available)

The objective of the Project is to improve the transport capacity and efficiency by constructing road bridge connecting Mandue city of Cebu island and Lapu Lapu city of Mactan island and connecting road, thereby contributing to alleviate serious traffic congestion as well as economic and social development.

Sarawak, Malaysia

State Profile

Area: 124,450 km²

Population: 2,471,140 (2010)

About Sarawak:

Sarawak is located in northwest of Borneo Island. The state is the largest among the 13 states in Malaysia. There are 12 divisions under the state and Kuching is the capital city. Her rich natural resources make the state an attractive nature-based tourism destination. It has a well-developed oil and gas; and oil palm industry.



Sarawak Government Portal

<https://www.sarawak.gov.my/>

Sarawak Multimedia Authority

<http://www.sma.gov.my/page-0-0-16-Smart-City.html>

Major problems and areas need solutions



Smart City Development

Under the Sarawak Digital Economy Strategies, the state promotes actions to improve socio-economic problems of the city and promote sustainable development of the city.

Strategies/master plan for sustainable cities

The Sarawak Digital Economy Strategy 2018-2022

The strategy is a document that shows a road map of Sarawak to transform it to digital economy. It clearly stated that the vision, which is "Sarawak new economy powered by knowledge, innovation and digital technology" and three missions, namely "accelerate Sarawak's economic growth," "reduce socio-economic divide," and "increase employment of youth". Forty-seven strategic actions of Sarawak digital economy transformation have been identified under the strategy, which consists of 29 actions in economic sector and 18 enabling actions.

To ensure the proper development of the Sarawak Digital Economy, the Sarawak Government has set up the Sarawak Multimedia Authority under the Sarawak Multimedia Authority Ordinance, 2017 to implement the strategic actions.

Example of on-going projects in the Sarawak State

- Implementation of smart traffic light system to elevate the overall efficiency of traffic management and transportation system (in Kuching)

Priority SDGs



Project Information

First Dispatch of Experts on the Environmental Conservation and Domestic Solid Waste Management in Kuching, Sarawak, Malaysia (2012-2015)

The JICA Partnership Program aimed at implementing development projects in developing countries planned by Japanese development partners, mainly NGOs, local governments and universities, based on their experiences and technologies in economic and social development at grassroots level.

Sidoarjo Regency, Indonesia

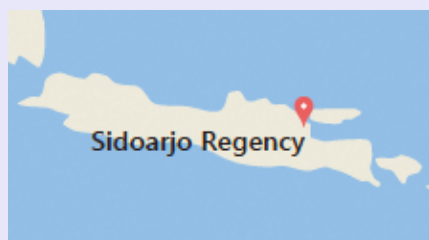
Regency Profile

Area: 760 km² (2019)

Population: 2,262,440 (2019)

About the regency:

Sidoarjo is located in East Java, Indonesia. At 760 km² is the smallest regency of the province but it is also one of its fastest growing areas, taking 60% of all the provincial residential development. The regency is comprised by 18 districts.



Sidoarjo Regency

(in Indonesian)

<http://portal.sidoarjokab.go.id>

Major problems and areas need solutions



Waste Management

A smart waste treatment technology that can convert waste into electrical power/energy and also a system/technology that can control the volume of waste in Sidoarjo. The technology should be efficient and effective.

<Solutions needed>

How to develop a waste to energy (WTE) incinerator.



Smart City Development

Integrated system for services in all departments/agencies of the Government of Sidoarjo Regency. One integrated system that can be used together by all departments (smart governance).

<Solutions needed>

For parking (roadside parking system) should be combined with technology (ICT/IOT).

Strategies/master plan for sustainable cities

1. Power Plant Project with Waste Incineration

2. The Implementation of Smart City Concept in Sidoarjo Regency

Increasing the economic potential of the region towards Sidoarjo that is Innovative Prosperous, Independent and Sustainable.

Priority SDGs



Project Information

Smart City Sidoarjo (FY 2017 – now)

Status: On-going project by city budget

The project developed apps “Sidoarjo Home” and platform towards “Smart Investment City Sidoarjo” since 2017. The smart E-Gov aims to improve public services; one stop service for permit and application; and resilient program for emergency and disaster risk reduction. The program includes capacity building for government staffs and developing masterplan of Smart City Sidoarjo.

<http://portal.sidoarjokab.go.id/sidoarjo-smart-city>

Green and Clean Sidoarjo (SBH)

Status: On-going project by city budget

The program aims to achieve green and healthy city in Sidoarjo. First, improving the access to clean water; sanitation and wastewater treatment. The city allocate budget to build communal septic tank; improve the infrastructure for municipal solid waste management (MSW) and also increase awareness and participation for community waste management (CWM) and conduct preparation on waste to energy program in collaboration with the national government.

<http://dlhk.sidoarjokab.go.id/?page=v-berita&id=1550647038>,

<http://dlhk.sidoarjokab.go.id/downloads/Renja%20DLHK%20Sidoarjo%20Tahun%202019.pdf>

Suva City, Fiji

City Profile

Area: 2,048 km²

Population: 88,271 (2009)

About the city:

Suva is the capital of Fiji, and its largest metropolitan area. Located in the island of Viti Levu, the country's largest. The city is the country's main economic, political, and cultural centre, enjoying also of a prominent role in the South Pacific region.



Suva City Council

<http://suvacity.org/>

Major problems and areas need solutions



Smart City Development

Suva needs assistance with the creation of a roadmap to becoming a Smart City and is determined to achieve "Smart City" status. The City of Suva needs guidance on technology and analytics; what affordable technology should we put in place to gather data, and, once we have the data, how do we analyze it to provide value and improve quality of life? We are also very interested in developing a smart transportation system, with a focus on reduced emissions and the promotion of healthy living (by promoting cycling and walking). In becoming a Smart City, Suva, declared a Healthy City by WHO in 2011, wishes to further promote good health and wellbeing and to minimize the prevalence of NCDs amongst its ratepayers. By becoming a Smart City, Suva will also be more resilient and able to manage the impacts of Climate Change. Technology will be useful to manage Disaster Risks. We would like to learn from other coastal cities, in Japan and throughout Asia, that have already achieved "Smart City" status. What were their major challenges and how did they finance the technology required?

<Solutions needed>

- Creation of a roadmap to become a 'Smart City'
- Finding affordable technology
- Smart transportation system
- The city administrator sees opportunities for transport, waste, and security. Waste to energy is a possibility. So is installing CCTV cameras to gain discipline in the city
- Approaches to address floods to counter climate change is also high on the agenda
- Improve the current e-government platform, and a one-stop center for government services that can also meet the needs of the disabled



Waste Management

Suva needs to find an alternative to landfill and is interested in exploring methods of turning waste into fuel. The services of an expert in this area would help the City identify creative ways of decreasing the amount of waste it sends to landfill and devise a marketing and communications strategy to convince ratepayers of the need to decrease waste. Suva would also like to establish its own recycling facilities and partner with the private sector to encourage more recycling. Perhaps other cities could suggest ways to reuse green waste; Suva has had some successes in this area, ie three parks were renewed with the excess green waste created by Tropical Cyclone Winston.

Small scale back-yard composting has been introduced by subsidizing compost bins but it has not been popular. Waste segregation trials have been set up but the social bias for waste (waste pickers) has been preventing affluent people from using the community recycling spots.

<Solutions needed>

- Introduction of Digital Platform to improve communication between Council and stakeholders, including tracking of operations programs
- Introduction of large-scale Solid Waste Management Programs that include alternatives to landfills

Strategies/master plan for sustainable cities

Suva City Masterplan (drafting stage)

Suva City Council has aligned its strategic vision with the Fiji National Development Plan 2018-2022. The draft Master Plan for the greater Suva Area is under development and will be completed by the end of this month. The following key strategies are in place and will be reviewed over the next three months: i. To continuously strive for business excellence which promotes good governance and productivity – This overarching strategy comes under the responsibility of the Chief Executive Officer Division. ii. Effectively managing human resources, transport/traffic/illegal sales from public places, operations management within the city [including events management], property management, library services, markets and Suva Bus Stand management with an aim to deliver expected level of services; strategically integrating systems and processes of the Council that will improve the Council's capacity to deliver excellent service through Good Governance and Performance Management – This strategy for implementation comes under the Administration and Operations department. iii. Effectively managing Development Permits, including development control; implementing repair, maintenance and capital programs, as approved by the Council, and managing the fleet of the Suva City Council – This strategy for implementation comes under the Engineering Department. iv. Effectively implementing an Essential Health Services Program, including enforcement, to promote a healthy city – This Strategy for implementation comes under the Health Department.

The Master Plan for Suva is currently being developed. The draft document is still with the Singaporean team that has been engaged to write it. The Council vision at present is for "Suva to be a progressive and vibrant city with an enhanced quality of life for the city community and others".

Priority SDGs



Project Information

JICA: The Project for Introduction of Hybrid Power Generation System in the Pacific Island Countries (2018 – Ongoing).

JICA is now providing technical cooperation in 5 countries including FSM, Marshall Islands, Fiji, Tuvalu, Kiribati, to configure and stably operate hybrid systems that effectively combine renewable energy with diesel generators and storage batteries, if necessary.

<https://www.jica.go.jp/fsm/english/office/topics/180516.html>

https://www.jica.go.jp/english/news/field/2018/20180507_01.html

GGGI: Supporting the Implementation of the Green Growth Framework for Fiji – Phase 2 (2017 – Ongoing).

The project is aimed at mobilizing investment by equipping the government with implementable green growth policy recommendations, while building capacity to adopt and implement the policy. This project will support the government of Fiji cultivate a vibrant business environment through clear policy signals for reducing barriers and encouraging private sector investments. GGGI will achieve this by delivering the following outputs: 1) National green energy policy and action plan developed and aligned to the National Development Plan. 2) Project design and financing proposal for green energy bankable project prepared. 3) Green electrification master plan developed and aligned to the National Development Plan. 4) Training on planning and implementation of policies delivered. 5) Policy recommendations on urban green transport systems developed.

<https://ggi.org/project/supporting-the-implementation-of-the-green-growth-framework-for-fiji-phase-2/>

ADB: Urban Water Supply and Wastewater Management Investment Program. (2016 – Ongoing).

The impact of the proposed investment program will ensure future growth in the greater Suva area (GSA) is sustainable and will improve public health. The outcome will be improved access to sustainable water supply and sewerage services in the GSA. The investment program has three outputs: Output 1: Supply and access to safe water in the GSA improved. Output 2: Wastewater treatment (WWT) and management capacity in the GSA increased. Output 3: WAF management and sustainable service delivery capacity improved.

<https://www.adb.org/projects/49001-002/main>

ADB: Regional: Revitalization of Informal Settlements and their Environments using a Water-Sensitive Approach [Same to Makassar] (2017 – 2020)

The proposed knowledge and support technical assistance (TA) will support the piloting of an approach and technology for the proposed Revitalization of Informal Settlements and their Environments using a Water Sensitive Approach (RISE) project. Pilots will be undertaken in Makassar City, Indonesia and in the Greater Suva Area, Fiji. In line with ADB's existing knowledge partnership with the Cooperative Research Centre for Water Sensitive Cities (CRCWSC), the piloting represents the first adaptation of CRCWSC's water-sensitive approach to infrastructure in a development context. The technology aims to demonstrate the effectiveness of a water-sensitive approach which uses decentralized, green infrastructure to biologically treat contaminated and polluted water, and in doing so improve the environmental quality and health of the community. Experiences and lessons from the demonstration activities undertaken through the TA are expected to inform technical design, implementation arrangements and cost estimates for the proposed RISE project.

<https://www.adb.org/projects/51290-001/main>
