Technical Assistance Consultant’s Report

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Promoting Gender Equality and Women’s Empowerment (Phase 2)
—Future Cities, Future Women Initiative

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For the Asian Development Bank

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TA-8797 REG: Promoting Gender Equality and Women’s Empowerment
Subproject: Future Cities, Future Women Initiative, Phase I – Bandung

FINAL REPORT
December 2019
GENDER MAINSTREAMING IN URBAN PLANNING
Future Cities, Future Women Initiative (FCFWI) aims to identify and support key triggers that would accelerate women’s participation in urban governance and enhance their productivity. FCFWI focuses in three cities: Mandalay in Myanmar, Tbilisi in Georgia, and Bandung in Indonesia.

The intention of this assignment in Bandung under FCFWI is to investigate options for improving gender sensitivity in urban planning using a geospatial-based planning support tool, ur-scape. ur-scape consists of software and data collection protocols. It has been developed over a period of three years by the Urban-Rural Systems research group at the Future Cities Laboratory (FCL) at the Singapore-ETH Centre. It has been black-box tested within FCL. Further functionalities were developed for ur-scape in the context of the Bandung Smart Systems project (under the ADB TA-9025 REG: Establishing the Future Cities Program in the Asia and Pacific Region). The detailed chronology of these projects could be seen at Annex B. Subsequently, field trials were undertaken with user groups in Bandung and three other cities in Indonesia. This ongoing co-design work being carried out by FCL involves software development, training and feedback loops around specific use cases. The software can be a valuable tool in urban planning and targeting of resources to meet priority needs around the city.

The objective of the assignment is two-fold:
1. to continue to build the capacity in Bandung city to use ur-scape for planning purposes and improve the sustainability of the system; and
2. to improve the gender sensitivity and responsiveness of the system that could be applied in other cities in Indonesia.

The assignment includes the following activities:
1. Hold initial planning meetings in Bandung with city departments to plan the activities and discuss options;
2. Work with relevant staff and existing ur-scape working group in Bandung City to further build familiarity with the system and pilot its use in the planning process;
3. Hold one capacity building workshop and include sessions on the potential sources and use of sex-disaggregated data in planning;
4. Explore the possible sources of gender-disaggregated data that could be used to improve the gender sensitivity and responsiveness of the planning process in Bandung, Makassar, and other cities in Indonesia;
5. Hold consultations with potential data owners and users in Bandung to secure sex-disaggregated data for including in the ur-scape platform of inputting the data;
6. Together with planning staff and other stakeholders in Bandung develop at least 3 scenarios in which sex-disaggregated data are used in ur-scape; and
7. Hold a final workshop to present findings and gain further input and recommendations from Planning Asian Development Bank.

This report presents the results of FCFWI project, combining the ur-scape sustainability report (Paper 1) and the planning scenarios report (Paper 2).
**BACKGROUND RESEARCH**

This project was kickstarted with an initial background research to deepen the team’s understanding of main challenges faced by women in cities, in particular in Bandung, and the basic tenets of gender-mainstreaming in urban planning. The background research includes a review on the existing government gender-mainstreaming initiative, extensive literature review on gender mainstreaming initiatives and common issues in urban areas, as well as a series of discussions with local gender-related organizations in Bandung.

### 1. Review on existing initiative and gender-related data in Bandung City

Bandung City Government has formed a local working group that was tasked to mainstream gender issues in the city planning. This is accommodated in Mayor’s Decision No. 260/Kep.454-DP3APM/2017 on Gender Mainstreaming Working Group and No. 260/Kep.455-DP3APM/2017 on Focal Point of Gender Mainstreaming in City Departments. Bappelitbang Bandung leads the working group, assisted by DP3APM as the secretary, and all city departments are members of the working group. Secretaries of each city department are appointed as the Gender Focal Points. To streamline the initiative, we work with members of the working group and gender focal points.

Specifically, for the gender-sensitive urban planning project, the city appointed DP3APM as the leading sector, under the guidance of Mr. Tatang Muhtar as the Head of DP3APM. Together with Bappelitbang, DP3APM works with FCL to organize meetings and trainings in order to improve the literacy of ur-scape, particularly in the use of ur-scape to visualize gender related data as an approach towards more gender-sensitive planning in the city.

In addition, Bandung has a Mayor’s Decree, issued on December 28th, 2018, to establish a designated ur-scape working group (pokja) for Bandung. The Decree sets a ground initiative to deepen explorations for possible planning interventions that provide overarching interactions across different departments on a single operation platform. The main task of the working group (pokja) is to ensure the sustainability and development of ur-scape in order to optimize its usage and benefits for Bandung (as written in the Mayor’s Decree clause 6). The working group is chaired by Bappelitbang, who is assisted by Diskominfo. Bappelitbang will be responsible to coordinate the development and usage of ur-scape whilst the Diskominfo will assist specifically in managing the city data from various departments of the city. Both departments are also responsible to support ur-scape knowledge dissemination to other departments as well as to develop possible interface connection to other applications of the city.

A series of meetings was held with these key departments in August 2019 to kick-off the project and to discuss technical issues regarding local priorities, data and stakeholders, integration of gender-related data on ur-scape, and availability of existing data for mainstreaming gender issues in spatial planning. Several data sets were shared during the meeting.

### 2. Literature Review Summary

We have reviewed a number of scientific studies pertinent to gender issues in urban areas, as well as several guiding documents related to gender mainstreaming in urban planning from a number of international and multilateral organizations (such as ADB and UN Habitat) (See References at the end of the document).

Based on our research, we identified four dimensions of gender mainstreaming in urban planning: Mobility - Accessibility - Participation - Safety and Security; or MAPS, to make the aspects more accessible and understandable for the city government (See Box 1 and separate booklet).

We employed the MAPS dimensions to introduce gender mainstreaming in urban planning and guide our engagements with the city government in Bandung.

### 3. Engagement with Gender-focused Organizations in Bandung

To better understand the local gender issues in Bandung we conducted a series of engagements with local civil society organizations (CSOs). Supported by Resilience Development Initiatives (RDI), the project’s local enabler, we have conducted separate meetings with representatives of CSOs that work on women empowerment issues. The meetings was held between 4-6 September 2019, with 6 organizations: PKK Kota Bandung Pokja 2, JARI (Laringan Relawan Indonesia), Pasundan Durebang Women Crisis Cente, Pasukan, AKATIGA Bandung, Komunitas Samahita.

**Box 1. Four Dimensions of Gender Mainstreaming in Urban Planning - MAPS**

**Mobility.** Effective, reliable and affordable transport systems and services help women to navigate the city in their daily life. Women often manage multiple daily tasks that require commuting between homes, schools, marketplaces, workplaces and civic facilities. Their poor commute experience may impact their quality of life and productivity.

**Accessibility.** Proper consideration and prioritisation of women’s needs for public facilities (e.g. health centres, women and children clinics, vocational training centres, etc.) and basic services (e.g. clean water, gender separated toilets, etc.) are limited. Despite the provision of such facilities and services, women often face difficulties in accessing them due to social, economic and cultural barriers as well as poor planning.

**Participation.** Participation in public life, economic activities and city planning processes by women remains limited in cities due to social, economic and cultural barriers. The lack of inclusive decision-making processes and opportunities for participation often hinders personal development and renders the needs and aspirations of women unconsidered.

**Safety and Security.** Safety and security in daily environments ensure conducive living conditions for women. The movement and activity patterns of women are often shaped by their sense of safety (e.g. safe streets, public transport and public spaces) and security (e.g. the absence of fear of criminal activities, harassments and physical violations, etc.) in their living and working environments.
Discussions revolved around and beyond the four dimensions of gender-sensitive urban planning - Mobility, Accessibility, Participation and Safety and Security - as identified in the literature review stage. Discussion also covered the following points:

1. In general, it is perceived that the understanding of gender sensitivity in urban development is still very limited, especially at the government and parliamentary levels, hence gender mainstreaming in urban development remains a challenge.

2. New trends in gender-based violence (GBV) include the impact of water access and scarcity on GBV during the dry seasons, and the online-based gender violence (GOBV) among youth (high school and university students) mostly in poor communities.

3. Although 30% quota for women participation in legislative body has been achieved, it mostly focuses on meeting the quota. Capacity of women legislators who represent women’s concerns and aspirations in the city need to be strengthened.

4. Several hotspots for gender-related cases were identified. These hotspots include traditional markets, slum areas such as Cicadas, Kiara Condong, Pasteur, Dago Utara, Coblong, Batunungan, Cipondewa, Ujung Berung, and border areas between Bandung City and Bandung Regency.

5. The need for a dialogue between gender-focused CSOs, city departments, academics, and other stakeholders to strengthen gender-mainstreaming in urban development.

Results of discussion with representatives of CSOs also contributed to the design of gender scenario development workshop with the city government that was held in October 2019.

4. Data Collection

As a first step to assess readiness of the city in mainstreaming gender consideration in their planning, we examined and inventoried their sex-disaggregated data. We took the following approach for data collection:

1. Create a list of potential data that is relevant to gender-sensitive urban planning. The list of data is continuously updated based on the discussions with Bandung city departments and data availability from other sources.

2. Explore available data in FCL. Our previous engagement focusing on poverty issue has provided this project with a number of data that are also relevant for gender analysis. This includes for example data on female-headed households, sex-disaggregated data on poverty indicators, and others. The data are mainly provided by Dinsosnan-giks, but also by other department such as Dinkes and Bappelitbang.

3. Explore Bandung open data source (http://data.bandung.go.id/) to see which data are available online, are disaggregated by gender and other categories, are available in time series. A number of relevant data are available in the portal, although some are incomplete or dated. However, the portal provided us an insight of available offline data in each city department.

4. Explore offline data from city departments that are not available online. A technical meeting with Bandung city departments was held on 13 September 2019 to introduce the project and to request gender-disaggregated data that will be visualized in ur-scape. The meeting was attended by 36 government staff from various city departments, including: Dshub, Bappelitbang, DPWH, Disbudpar, DP3APM, Disdukcapil, Dinossangkis, DP-2KB, DKUMKM, Diskominfo, Disnaker, DLHK, PD Pasar, Dispantang, Disdik, DPU, Dispora, and Distaru. The meetings produced a modified list of data, which is currently being collected from each city department.

5. Explore tertiary data from various sources, including academic sources and others. For example, data from graduation thesis of urban planning, such as partial data on route of public transportation (trayek angkot), traditional market location, and hospital location.

6. Explore data from commercial data owners. FCL has contacted several companies, such as Tokopedia, Gojek, Glue, Traveloka, and several others. FCL is in dialogue with Gojek and Glue to discuss possible data sharing and use cases.

The data collection started immediately after the first coordination meeting with Bappelitbang, DP3APM and Diskominfo in August 2019. To date, we have obtained a number of relevant gender data in various formats. RDI as the local enabler provided their support to clean and input the data to ur-scape. However, the portal provided us an insight of available offline data in each city department.

5. Observation on the State of Gender-Related Data in Bandung

Most cities in Indonesia, just like Bandung, collect sex-disaggregated census and thematic data. The quality and format of data, however, vary between cities and departments. The use and analysis of such data are generally limited. While some departments such as DP3APM use the data for their programmes planning, others generally ignore the gender components. At the same time, DP3APM as the leading sector in gender planning depends on other departments for sex-disaggregated data. Hence, the quantity and quality of the gender-related data as well as coordination of city departments to collect such data in Bandung still need to be improved.

Moving forward FCL recommends to collect sex-disaggregated data for selected topics (see Annex A, data that is marked by a star is recommended for sex-disaggregation). By doing so, it will help the city government to better understand the gender-based challenges on the ground at different sector, and properly define the problems, thus help them to formulate more specific and targeted gender mainstreaming strategies in city planning.

Meeting with various city departments on 13 September 2019 and 3 October 2019 to discuss the state of gender related data and the process of data collection.
1. Gender scenario development workshop

The workshop and training took place on 7 October 2019 with the aim to introduce ur-scape usage for gender and poverty data visualization.

- The gender scenario development workshop focused on gender issues in relation to poverty, as a continuation of the previous ur-scape project on poverty data visualization. Participating city departments were expected to share their perspectives on the intersection of gender and poverty to encourage further dialogue on more cross-cutting programs during the workshop. About 32 municipal staff participated in the event. They came from various city departments, including: Dishub, Bappelitbang, DPKP3, Disbudpar, DP3APM, Disdukcapil, Dinsosnangkis, DP2KB, DKUMKM, Diskominfo, Disnaker, DLHK, PD Pasar, Dispan rates, Disdik, DPU, Dispora, and Distaru. Some of them have participated in the previous ur-scape training (which focused on poverty issue) in Bandung.

- ur-scape training focused on the first module of ur-scape: Operations. The training was delivered in a relatively limited time and was slightly hampered by logistical issues, as only a few participants brought their laptop resulting in limited opportunity for participants to get a hands-on experience in using ur-scape. Hence, further technical training was deemed necessary. Subsequently, a series of smaller training sessions (involving max 10 participants from two agencies per session) were conducted in November 2019. These trainings were more efficient as it gave better opportunities for participants to ask questions and receive specific technical guidance.

2. Proposed scenarios

During the workshop, we introduced four case studies (see page 12) that represent MAPS to trigger dialogues among various city departments. The cases were drawn from real-life cases that were highlighted by the representatives of civil society organization during the previous meetings in September.

Working in groups, participants were asked to:
- identify basic infrastructures and public services provisions that are relevant to the case study
- describe the ideal state of the identified infrastructures and services
- identify the necessary government programs to achieve the ideal state, and
- identify relevant datasets needed to improve such programs.

Each group was guided by one facilitator from FCL and RDI. At the end of the exercise, the participants were expected to produce several scenarios of integrated programming for each of the case study and visualize them on ur-scape.

At the end of the workshop participants produced four planning scenarios (see page 13) for gender-sensitive planning based on the case studies. The planning scenarios reflect the respective MAPS dimension in practical terms. It show the types of data that could be used for problem identification, and how might the data be used to identify priority areas. There are many case studies that can be used for this purpose, hence there are various planning scenarios that could be produced depending on the issues or the topics the government wish to focus under each MAPS dimension.

Following the workshop, these scenarios were further discussed with the leading agencies (DP3APM and Bappelitbang), who considered them useful as indications of priority areas in Bandung that may need special attention. Nevertheless, it was agreed that further research on each specific topic is necessary before they could translate them in actual planning actions.

Gender workshop and ur-scape training, 7 October 2019
Case Studies

These four case studies, that reflect MAPS, were drawn from real-life cases that were shared by the representatives of civil society organization during the previous meetings in September 2019. Using real-life cases ensure the reliability of the case studies to the workshop participants.

Case Study 1.
Mrs. A is married with 1 son. Her husband works as a security guard in a local company. To meet her daily needs, Mrs. A has to work in a textile company about 12 km away from her home. Every day she takes her son to kindergarten on motorcycle. After school, the son goes to a private childcare owned by one of his teachers until about 5 pm, when Mrs. A picks him up. One day, Mrs. A had to use public transportation because her motorcycle was broken. Because of the heavy traffic, Mrs. A was late to pick her son up, so she had to pay more for the extra hour. She also came home late and did not manage to prepare dinner on time for the family. On the same day, her husband was laid off from work. Due to the tensions and aggravations, they were involved in a fight and Mrs. A was physically violated by her husband.

Case Study 2.
Mrs. B is married with 3 children and is now pregnant with her 4th child. Her husband is a construction worker but is currently unemployed. They live in a squatter area that is highly vulnerable to fire incidences and has a poor clean water provision during the dry season. With her husband unemployed, Mrs. B needs to rearrange their finance to fulfill their needs. This month, she needs to set her prioritization on no. 1, 2, 3 and 4. When her husband asked for some money to buy cigarettes and she could not provide it, he blamed Mrs. B for her inability to earn additional income. However, the women group (PKKI) in her neighborhood is not very active and there is no opportunity to join in any handicraft training in her neighborhood. Last week, Mrs. C heard that there is a plan for a community meeting at the sub-district office to gauge feedback from community on various issues. She is interested to attend the meeting to request for vocational training for women, especially for retirees. She also intended to ask for regular mosquitoes fogging in her area since several of her neighbors were infected with dengue fever. However, as she was not invited, she hesitated to attend the meeting. She inquired whether she could nevertheless come to the meeting to her neighbors, the women group (PKKI) and the neighborhood committee (RT), but no one could advise her accordingly. Hence, she decided not to go to the meeting, and therefore let her feedback not conveyed to the local government.

Case Study 3.
Mrs. C is married with 2 children and 2 grandchildren. As she and her husband are retired, she is a full time home maker. She is active in the neighborhood social gathering (tarian group) and is interested in handicraft activities, hoping to set up a small handicraft business in the future to earn additional income. However, the women group (PKKI) in her neighborhood is not very active and there is no opportunity to join in any handicraft training in her neighborhood. Last week, Mrs. C heard that there is a plan for a community meeting at the sub-district office to gauge feedback from community on various issues. She is interested to attend the meeting to request for vocational training for women, especially for retirees. She also intended to ask for regular mosquitoes fogging in her area since several of her neighbors were infected with dengue fever. However, as she was not invited, she hesitated to attend the meeting. She inquired whether she could nevertheless come to the meeting to her neighbors, the women group (PKKI) and the neighborhood committee (RT), but no one could advise her accordingly. Hence, she decided not to go to the meeting, and therefore let her feedback not conveyed to the local government.

Case Study 4.
Mrs. D is a divorcee with 2 children, one in high school and another in junior high school. She divorced her husband 5 years ago, and since then, hold 2 jobs: as a waiter in a small neighborhood stall in the morning and as a worker in a manufacturing company in the afternoon. The company offers her two transportation options: a ride on the company shuttle buses or a public transport stipend. As she can manage the stipend on her own, Mrs. D decided to take the second option as she could save part of the stipend as additional income. However, the second option, with two transport transfers and some extra walk, involves a longer commute. Mrs. D typically arrives at home at around 11pm. She is constantly worried about her safety during her daily commute, because the drivers keep changing the routes and the streets are badly lit and very quiet at night. Adding to her worries, there are several unresolved criminal cases targeting women along these routes.

Scenario 1. Identification of areas in Bandung that are in need of basic services improvement to enable women to have multiple roles and better mobility

Scenario 2. Identification of areas in Bandung that are in need of basic services improvement for women from poor households who are vulnerable to lack of proper sanitation and poor health
Scenario 4. Identification of areas in Bandung that are in need of basic services improvement to enhance the access of female-headed households with multiple roles to safety and security in using public transportation system.

1. ur-scape introduction and training to local partner

The engagement in Bandung is supported by the Resilience Development Initiative (RDI), a local think tank initiative that focuses on community, environmental change and sustainable development. The engagement with RDI potentially exhibits a model of collaboration with a local partner for ur-scape future development and training in Bandung city. Similar models are also being explored and developed in Makassar and Semarang.

FCL has trained a number of RDI staff on both ur-scape’s “Operations” and “Data Import Modules”. They have practiced the newly acquired skills by helping to process and upload the gender-related data to ur-scape. RDI staffs were subsequently involved in a series of ur-scape technical training sessions for Bandung municipal staffs in November 2019. These trainings were led by RDI to test the viability of a specific engagement model whereby a local organization, such as RDI, acts as an ambassador of ur-scape in Bandung city. FCL is currently exploring ways to formalize the partnership with RDI.

2. ur-scape introduction to civil society organization

During the previous meetings with CSO representatives, FCL introduced ur-scape to the attendees as a tool to visualize the existing data, hence showing its potential to help them better understand gender issues in Bandung City. Several CSO representatives showed interest in ur-scape and inquired about having an ur-scape training for non-government users. As this is currently outside of the project scope, we took note of the interest to be potentially accommodated in future projects.

FCL is also exploring possible collaboration with Ikatan Ahli Perencanaan Indonesia (IAP). The IAP General Secretary has expressed his interest to establish ur-scape as national planning tool during his visit to FCL. FCL has also worked with IAP Central Java Chapter to conduct an ur-scape training for IAP members in Semarang in November 2019. As IAP chapters work independently from IAP National level, the engagement with IAP Central Java could hopefully pioneer our bottom-up engagement with planners/practitioners community. It is to note that the connection with IAP Central Java chapter is made through personal connection instead of the municipalities or academic community in Semarang. Such initiative hopefully can act as an encouraging push to the city for developing closer collaboration with professionals as well as academics.

3. ur-scape training sessions to city departments

In an evaluation meeting following the gender planning scenario workshop, Bappelitbang and DP3APM suggested to hold a series of smaller ur-scape training sessions for the city departments to improve ur-scape technical literacy among municipal staffs. Hence, over the span of 5 days between 12-19 November 2019, FCL and RDI conducted a series of smaller sessions for various city departments. The training sessions were attended by a total of 36 government staffs from 18 departments, which include: DP2KB, DP3APM, Dinsosanngk, Disdukcapil, DPKPS, DPU, Bappelitbang, Distaru, DLHK, Dishub, DKPB, Dinkes, Diskominfo, DKUMKM, Disnaker, Dispora, Disbudpar.

As each training session was attended by 8-10 participants, we were able to provide a more intensive assistance to individual participants and solicit many technical input for ur-scape software improvement in the future. Based on the feedback from participants, we concluded that small-group training sessions on ur-scape were more effective and useful, especially when the majority of participants were not previously familiar with GIS software.

The team will continue to broaden linkages with relevant stakeholders in Bandung City to potentially include local universities, planning associations and consultants to gauge their interests and investigate their needs which could ensure the sustainability of ur-scape usage as well as build a community of practice.

4. Institutional setup

It is imperative to formulate a specific municipal-level regulation that could ensure the implementation of ur-scape as a part of the planning decision making, and its continued usage in the long run. While, the former Mayor Kamil has already decreed Mayor Regulation on the usage of ur-scape and the respective formation of its working group, to make it
5. Software improvement

- Release of new version. The team continues to develop and improve the software based on the feedback gained during the piloting in Bandung and has released the latest version of ur-scape source code in downloadable form. This gives stakeholders the opportunity to further customize the software in accordance to their own needs.
- User guide. Accompanying user guides have also been developed and shared with the city. Based on October workshop feedback, the city suggested to translate the user guide to Bahasa Indonesia for better understanding. Translation of the user guide is currently ongoing.

- Standard Operating Procedures (SOP). FCL is currently supporting the City of Bandung in drafting the Standard Operating Procedures for ur-scape implementation and usage, following the issuance of the Mayor Decree. The SOP can serve as a reference for other cities as well.
On December 2nd, the project was officially completed with a final meeting/project launch with the Bandung Vice Mayor, Yana Mulyana at the Bandung City Hall. The meeting was attended by representatives of all agencies who participated in the project workshops and ur-scape training.

The four resulting ur-scape planning scenarios for gender mainstreaming were presented in the meeting where the Vice Mayor officially accepted the scenarios. The launch was followed by a meeting with the Head of Bappeda and her team, to discuss the next steps to be taken by the city with regards to the use of ur-scape, which are to continue focusing on gender mainstreaming and poverty alleviation.

The project launch event with the Vice Mayor, Mr. Yana Maulana and the subsequent meeting with the Head of Bappeda, Mrs. Achyani was attended by several representatives from ADB: Ms. Sonomi Tanaka, Ms. Gillian Brown and Riana Puspasari.

The project launch event with the Vice Mayor, Mr. Yana Maulana, where the team presented the MAPS framework and the resulting ur-scape analysis and planning scenarios, and handed over the software and its latest database to the Vice Mayor.
The FCFWI project has been implemented in Bandung City since August 2019. During the 4-month duration of the project, we have learned several valuable lessons on how ur-scape as a geospatial-based planning support tool can contribute to improve gender sensitivity in urban planning and assess how it can be replicated in other cities in Indonesia.

Overall, we observed a need to improve the planning capacity of municipal staffs in three levels, which are better understanding of (1) basic urban planning principles (including the concept of gender mainstreaming in planning), (2) good data management practices, (3) technical data visualization and analytical skill. On the one side, the project has been able to raise an awareness among the municipal staffs on the concept of gender mainstreaming in urban planning. Although gender mainstreaming has been introduced by the National Government for several years in Indonesia, our observation shows that the understanding on how the concept can be practically implemented on the local level is still rather limited. We observed that by discussing the topic through the lens of various datasets that are relevant to gender-sensitive planning during the workshop and training, municipal staffs were able to internalize the gender mainstreaming concept better in their line of work. On the other side, municipal staffs have different levels of technical and planning capacity and skills. This situation greatly influences the quality of the discussion among the participants on gender-sensitive planning, either in general urban planning issues as well as in the more specific sectoral planning, and the level of ur-scape literacy across different city departments.

In terms of process, establishing strategic connections with the leading city departments at the beginning of the project is important to allow for rapport building and better coordination throughout the project. Technical meetings with all city departments who will be the data provider and/or ur-scape training participants in the beginning of the project is also necessary to build a sense of ownership to ur-scape and the data as visualized in the software. However, as observed in a previous ur-scape project in Bandung, we also faced the following challenges:

1. Securing consistent commitment from certain city departments was challenging. More often than not, different persons participated in different training sessions, resulting in the basic materials had to be repeated in every training session, rather than progressing to the next level. In this regard, the mini group training approach was considered to be effective, as it allowed for a more intensive support to training participants, whether they are new or not to ur-scape.

2. Data collection was challenging, especially in departments that were not familiar with ur-scape projects. Although the city has introduced MANTRA, an online system for data integration and sharing among government agencies, not many city departments know or use the system. In many departments, data comes in different formats and standards that the process of data cleaning became a big task in the data input process. In this regard, the project highlights crucial issues in data standardization, management, and sharing among city departments in Bandung. Even though certain policies and initiatives are currently in place, not all municipal staffs are familiar with them. Therefore, it is important to encourage the city to improve their system, as good data management and sharing practice is necessary to make the use of ur-scape, or any data analytical platforms, more effective and optimal.

3. Provision of a comprehensive user guide and data protocol in Bahasa is considered necessary to support ur-scape capacity building of municipal staff. In the previous project, the user guides have been developed in three volumes. The User Guide Volume 1, Operations, elaborates the main interface of ur-scape, the function of various tools developed, and how to operate those tools in order to develop planning scenarios, analysis and assessments. The User Guide Volume 2, Data Import, provides step by step guide to import vector and raster data by using QGIS and given Python code, and to import spreadsheet data into a format that is readable by ur-scape. The User Guide Volume 3, Institutional and Community Structure, describes the approach and process of ur-scape implementation starting from institutional and community engagement until capacity building. Copies of the user guides were distributed during the trainings. Meanwhile, FCL is currently work on translation of Volume 1 & 2 into Bahasa Indonesia.

On ur-scape sustainability, our observation showed that:

- To maintain the continuity of its usage, we need to encourage the formulation of specific regulation to integrate ur-scape or any planning tools in the urban planning process. Its implementation should be coordinated by Bappeda as the overarching coordination body for city planning and development, involving all city agencies and departments.

- There is a need to develop a community of practice in the city which includes government agencies, academia, practitioners, and non-profit organization to ensure the continuity of ur-scape use in Bandung city.

- There is a need to design a specific platform where-by FCL can continue to improve ur-scape capability. Continuous development of the software is necessary for further adoption of ur-scape by the city departments. By the time of this reporting, we have released ur-scape beta version 0.9.2. However, users may face some difficulties and may need to access technical support in the future. We also anticipate the future needs of users, which may require ur-scape to be adapted or modified to meet specific needs. In this regard, it is necessary to explore ways to engage with software developer communities in ur-scape further development and to explore viable business model that can enable these engagements.

The project also intended to explore the possibility to engage commercial data owners to identify and acquire useful and relevant sex-disaggregated data of Bandung city. However, engagement with commercial data owners involves a lengthy negotiation pertaining to the legal and technical aspects of data use and privacy management. Although FCL has initiated contacts with Gojek and Qlue, the limited duration of the project does not allow for a full demonstration of the potential use-case for improving gender-sensitivity in planning. We are still in the process of NDA negotiation with Qlue to obtain a sample data from Jakarta to demonstrate the use case of their data for improving gender-sensitivity in planning. Moreover, Qlue has stated their interest to be involved as an active partner in the scaling up of this project in other cities in Indonesia.
REFERENCES


ANNEX A

List of Bandung Gender-related Data available in ur-scape

<table>
<thead>
<tr>
<th>No</th>
<th>Group</th>
<th>Layer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Administrative</td>
<td>Detailed spatial plan</td>
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<tr>
<td></td>
<td></td>
<td>District (Kecamatan)</td>
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<tr>
<td>2</td>
<td>Access to electricity</td>
<td>Sub-district (Kelurahan) with 450W power</td>
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<tr>
<td></td>
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<td>Sub-district (Kelurahan) with 900W power</td>
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<td>Sub-district (Kelurahan) with 1300W power</td>
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<td></td>
<td>Sub-district (Kelurahan) with 2200W power</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sub-district (Kelurahan) with more than 2200W power</td>
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<tr>
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<td></td>
<td>Sub-district (Kelurahan) without any power supply measurement</td>
</tr>
<tr>
<td>3</td>
<td>U5 (under-five) Children</td>
<td>Boys U5 (12-59 months)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Girls U5 (12-59 months)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health coverage for boys U5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health coverage for girls U5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overnutrition boys U5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overnutrition girls U5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adequate nutrition boys U5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adequate nutrition girls U5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor nutrition boys U5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor nutrition girls U5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Undernutrition boys U5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Undernutrition girls U5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Guidance for family with U5 children</td>
</tr>
<tr>
<td>4</td>
<td>Babies</td>
<td>Number of baby boys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of baby girls</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health coverage for baby boys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health coverage for baby girls</td>
</tr>
<tr>
<td>5</td>
<td>Population</td>
<td>Density</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Basic education*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female population</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male population</td>
</tr>
<tr>
<td>6</td>
<td>Integrated data for poverty reduction program</td>
<td>Shared toilet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public toilets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No toilet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private toilet</td>
</tr>
<tr>
<td>7</td>
<td>DTPPFM - Asset ownership</td>
<td>Owning land</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Owning second house in other place</td>
</tr>
<tr>
<td>8</td>
<td>DTPPFM - Family head and members</td>
<td>Male-headed household</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female-headed household</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Households with male member(s)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Households with female member(s)</td>
</tr>
</tbody>
</table>
### List of Bandung Gender-related Data available in ur-scape

*Data sets that are recommended for sex-disaggregation*

<table>
<thead>
<tr>
<th>No</th>
<th>Group</th>
<th>Layer</th>
</tr>
</thead>
</table>
| 9  | DTPPFM – Chronic disease | Number of people with hypertension*  
Number of people with rheumatism*  
Number of people experiencing stroke before* |
| 10 | DTPPFM – Clean water access | Buy through retail  
Buy through subscription  
Not buying |
| 11 | DTPPFM – Government program participant | Family Welfare Card  
Indonesia Smart Card (for education)  
Indonesia Health Card  
Independent Participant for BPJS (universal health coverage)  
Jamsostek healthcare  
Insurance  
Family Welfare Program  
Prosperity Rice  
Micro Credit (KUR) |
| 12 | DTPPFM – Land status | \% living in owned-land*  
\% living on land owned by others*  
\% living on land owned by the government* |
| 13 | DTPPFM – electricity source | PLN (public)  
Non-PLN  
Not using electricity |
| 14 | Economy | UMKM (Micro, Small and Medium Business)  
Poor households  
Night light  
PKK UPZK Group (Family income increase program) |
| 15 | Geography | Greeneries  
Green landscape  
Topography |
| Happiness Index | Social Relations Aspect  
Security Aspect  
Family Harmony Aspect  
Health Aspect  
Availability of free time Aspect  
Environmental Aspect  
Work Aspect  
Income Aspect  
Education Aspect  
Housing and facility Aspect |
| 17 | Livable City Index | Spatial Planning Indicator  
Transportation Indicator  
Access to Basic Services Indicator  
Economy Indicator  
Environment Indicator  
Social Indicator  
Utility Indicator |
| 18 | Poverty Indicators – type of housing wall material | Plastered cement  
Concrete  
Wood or Bamboo  
Others |
| 19 | Birth | Live birth – boys  
Live birth – girls  
Stillbirth – boys  
Stillbirth – girls |
| 20 | Death | Death due to Dengue Fever – Female  
Maternal mortality rate |
| 21 | Vulnerability | Number of fire incidents  
Number of traffic accidents*  
Number of criminal cases*  
Number of reported cases of violence* |
| 22 | Health | Cases of Dengue Fever – Female  
Number of family under PHBS surveillance |
| 23 | Tourism objects | Tourism destination for children |
| 24 | Female participation | Political participation  
Legal participation  
Social participation  
Economy participation  
Participation in government  
Participation in non-government |
| 25 | Basic services | Access to water source  
Water source from well  
Water source from pipe  
Adequate Access to Sanitation  
Adequate Access to Water Source |
| 26 | Population based on marriage status | Not married*  
Married*  
Divorced and not remarried*  
Widowed and not remarried* |
### List of Bandung Gender-related Data available in ur-scape

*Data sets that are recommended for sex-disaggregation*

<table>
<thead>
<tr>
<th>No</th>
<th>Group</th>
<th>Layer</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>Waste and Sanitation</td>
<td><strong>Number of Sanitation Workers</strong>&lt;br&gt;<strong>Number of neighborhood waste collector bins</strong>&lt;br&gt;<strong>Number of sanitation worker groups</strong>&lt;br&gt;<strong>Number of waste bins</strong>&lt;br&gt;<strong>Temporary waste disposal site</strong>&lt;br&gt;<strong>Number of waste trucks</strong></td>
</tr>
<tr>
<td>28</td>
<td>City Waste</td>
<td><strong>Volume of waste</strong>&lt;br&gt;<strong>Volume of waste transported to final disposal site</strong>&lt;br&gt;<strong>Waste truck rotation 1x</strong>&lt;br&gt;<strong>Waste truck rotation 2x</strong>&lt;br&gt;<strong>Waste truck rotation 3x</strong>&lt;br&gt;<strong>Waste truck rotation 4x</strong></td>
</tr>
<tr>
<td>29</td>
<td>Housing and settlement</td>
<td><strong>Number of low-income household</strong>&lt;br&gt;<strong>Number of non-low-income household</strong>&lt;br&gt;<strong>Number of family with clean water services for drinking, showering and washing</strong></td>
</tr>
<tr>
<td>30</td>
<td>PMKS (People with social welfare problems)</td>
<td><strong>Street children</strong>&lt;br&gt;<strong>Neglected elderly</strong>&lt;br&gt;<strong>Disabled</strong>&lt;br&gt;<strong>Homeless</strong>&lt;br&gt;<strong>Beggars</strong>&lt;br&gt;<strong>People with HIV</strong>&lt;br&gt;<strong>Trafficking victims</strong>&lt;br&gt;<strong>People affected by disaster</strong>&lt;br&gt;<strong>Female with social and economy vulnerabilities</strong>&lt;br&gt;<strong>Traffic accidents</strong>&lt;br&gt;<strong>Vehicles involved in traffic accidents</strong></td>
</tr>
<tr>
<td>31</td>
<td>2030 Detailed Spatial Plan (ROTR)</td>
<td><strong>ROTR Natural conserved area</strong>&lt;br&gt;<strong>ROTR Green area</strong>&lt;br&gt;<strong>ROTR Agriculture</strong>&lt;br&gt;<strong>ROTR Conservation</strong>&lt;br&gt;<strong>ROTR Airport perimeter</strong>&lt;br&gt;<strong>ROTR Non Green area</strong>&lt;br&gt;<strong>ROTR Lake</strong>&lt;br&gt;<strong>ROTR Pond</strong>&lt;br&gt;<strong>ROTR Housing</strong>&lt;br&gt;<strong>ROTR Public Service</strong>&lt;br&gt;<strong>ROTR Health</strong>&lt;br&gt;<strong>ROTR Education</strong></td>
</tr>
<tr>
<td>32</td>
<td>Green spaces</td>
<td><strong>Number of parks</strong>:&lt;br&gt;<strong>Green spaces</strong></td>
</tr>
<tr>
<td>33</td>
<td>Health facility</td>
<td><strong>Poskesmas</strong>&lt;br&gt;<strong>General Hospital</strong>&lt;br&gt;<strong>Apotheary</strong>&lt;br&gt;<strong>Clinic</strong>&lt;br&gt;<strong>Hospitals</strong>&lt;br&gt;<strong>Pesyandu</strong>&lt;br&gt;<strong>Number of healthy houses</strong></td>
</tr>
<tr>
<td>34</td>
<td>Education facility</td>
<td><strong>TK / Kindergarten</strong>&lt;br&gt;<strong>SD / Elementary school</strong>&lt;br&gt;<strong>SMP / Junior high school</strong>&lt;br&gt;<strong>SMA / High School</strong>&lt;br&gt;<strong>University</strong>&lt;br&gt;<strong>Holistic ECCD institution</strong>&lt;br&gt;<strong>TK institution</strong>&lt;br&gt;<strong>Playgroup institution</strong>&lt;br&gt;<strong>Childcare institution</strong>&lt;br&gt;<strong>Alternative ECCD institution</strong></td>
</tr>
<tr>
<td>35</td>
<td>Trading and economy facility</td>
<td><strong>Bank</strong>&lt;br&gt;<strong>Hotel</strong>&lt;br&gt;<strong>Market</strong></td>
</tr>
</tbody>
</table>
List of Bandung Gender-related Data available in ur-scape
*Data sets that are recommended for sex-disaggregation

<table>
<thead>
<tr>
<th>No</th>
<th>Group</th>
<th>Layer</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>Office facility</td>
<td>Kecamatan/District offices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kelurahan/Sub-district offices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Government offices</td>
</tr>
<tr>
<td>37</td>
<td>Poverty distribution</td>
<td>Kelurahan Desi 01/Ultraper sub-district [the lowest 10%]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kelurahan Desi 02/Ultraper sub-district [the lowest 11-20%]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kelurahan Desi 03 Ultraper sub-district [the lowest 21-30%]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kelurahan Desi 04 Ultraper sub-district [the lowest 31-40%]</td>
</tr>
<tr>
<td>38</td>
<td>Employment</td>
<td>Male workers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female workers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Workers participating in BPJS universal health care*</td>
</tr>
<tr>
<td>39</td>
<td>Transportation</td>
<td>Network</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reachability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Read network area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Train station</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Terminal Type A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Terminal Type B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Terminal Type C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public transportation route</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trans Bandung Bus stop</td>
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<tr>
<td>41</td>
<td>Elderly</td>
<td>Male elderly health coverage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female elderly health coverage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of male elderly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of female elderly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Guidance for family with elderly member</td>
</tr>
</tbody>
</table>
## Project Timeline

**TA-8797 REG: Promoting Gender Equality and Women’s Empowerment**  
Subproject: Future Cities, Future Women Initiative, Phase I – Bandung

### Activities

<table>
<thead>
<tr>
<th>Activities</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature Review (policies, scientific paper, reports)</td>
<td>1 2 3 4</td>
<td>5 6 7 8 9</td>
<td>10 11 12</td>
<td>13 14 15 16</td>
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<tr>
<td>Stakeholders Identification</td>
<td></td>
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<tr>
<td>Stakeholders Engagements: Workshops</td>
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<tr>
<td>Stakeholders Engagements: Interviews</td>
<td></td>
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<tr>
<td>Potential Data Exploration</td>
<td></td>
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<tr>
<td>Data Owners Engagements</td>
<td></td>
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<tr>
<td>Scenarios Development</td>
<td></td>
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</tbody>
</table>

### Deliverables

#### Events and Milestones

- **Kickstart and Initial Meetings at the Municipality**
- **ur-scape Capacity Building Workshop**
- **Scenario Development Workshop**
- **Bandung ur-scape updated with gender data**
- **Launching Event**

### Reports

- **Inception Report (workplan and schedule)**  
  - 8 Aug
- **Paper 1 - Draft Sustainability and Workshop Report**  
  - 20 Oct
- **Paper 2 - Draft Options Report**  
  - 20 Oct
- **Paper 1-2 - Final Sustainability and Options Report**  
  - 25 Nov

### NOTE

**Paper 1:**
A brief paper discussing how sustainability and use of the ur-scape could be improved, and reports of workshops

**Paper 2:**
A paper on potential options for improving gender sensitivity and responsiveness of planning using ur-scape that includes:
- Summary of possible sources of gender-disaggregated data and the feasibility of using these data in terms of access, cost, compatibility and ease of input;
- Brief examples of how the data could be used in the planning process;
- Concrete proposal for 3 scenarios in which sex-disaggregated data can be prepared using ur-scape
Goals:
1. Improve planning capacity based on data in the 4 cities
2. Increase ur-scape literacy in the 4 cities

ur-scape trainings in Bandung:
- Aug 2018
- Nov 2018 (final)
- May 2019 (additional – with poverty data)
- Aug 2019 (additional – with poverty data)

Additional activity:
Supporting Bandung city government to formulate SOP

Donor: ADB

Gender Workshop & ur-scape trainings:
- Oct 2019
- Nov 2019 (series of small group trainings, a total of 5 trainings)

Handover of ur-scape with gender data to Bandung city

Donor: SECO
Future Cities Laboratory Team

Project Leader:
Prof Stephen Cairns

Project co-Leader:
Dr Devisari Tunas

Project Coordinators:
Dr Akino Tahir and Rosita Samsudin

Field Researcher team:
Khairani Mardhiah, Resilience Development Initiative (RDI) – Bandung
Endriana Prasetyawati, Resilience Development Initiative (RDI) – Bandung
Muhammad Eka Kurniawan, Resilience Development Initiative (RDI) – Bandung

Asian Development Bank Team

Chief of the Gender Equity Thematic Group:
Sonomi Tanaka

Team Leader (Consultant), Future Cities Future Women Gender Specialist,
TA-8797 REG:
Gillian Brown

Gender Specialist:
Riana Puspasari

Senior Urban Development Specialist:
Joris van Elten

Illustrator
Yoshi Andrian