



# EMBRACING THE SUN:

Redefining Public Space as a Solution for  
the Effects of Global Climate Change in  
Indonesia's Urban Areas

**PROJECT INCEPTION REPORT**

**November 2022 – March 2023**

## Glossary

AF	Adaptation Fund
Bappeda	Local Development Planning Agency (Badan Perencanaan Pembangunan Daerah)
CCA	Climate Change Adaptation
CeCUR	Center for Climate and Urban Resilience
CSO	Civil Society Organization
NUA	New Urban Agenda
SDGs	Sustainable Development Goals
SEP	Stakeholder Engagement Plan
UNTAG	University of 17 Agustus 1945 Surabaya
QUT	Queensland University of Technology

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## Executive Summary

The New Urban Agenda (NUA) and Sustainable Development Goals (SDGs) 11 recognize the strategic role of public space in supporting communities located in urban environments. Recent research addresses vulnerability issues in public space and explores resilience strategies that reduce the impacts of extreme weather events. The Embracing the Sun project aims to enhance awareness of Indonesia and lay a concrete resilient groundwork in the face of the climate crisis. Project intervention will design public spaces that try to minimize environmental hazards caused by climate change with water-sensitive design. It is adopted to reduce or ease flood impacts, trees, and vegetation to curb heat island effects and systemic approaches to promote the creation of ecological corridors that support urban flora and fauna. All the measures described are reactive by nature, aiming to cope with the effects of climate change.

The project adopts a different approach to facing climate change, focusing on public space as a vital urban element and as means for community engagement and education on climate change. Through this project, we will formulate a new concept and typology of public space as an integrated infrastructural support for local communities faced with the multi-layered complexities and challenges induced by climate change, i.e., flood preparedness and other relevant hydro-meteorological disasters. The project will support communities in absorbing and adapting to the impact of annual floodings and support communities in pre and post-disaster.

As a pilot city in Samarinda, Indonesia, a new typology of the "climate-adaptive" multipurpose public space will be tested as a tool that could answer climate challenges. The design process relies on the engagement and involvement of local communities, as well as local governments. It will provide structures and systems to deal with critical environmental issues relevant to Indonesia and a global context. The new public space will integrate and improve the current urban environments in which it is located and simultaneously envisioned as an ecological-social "anchor" to support the local communities. The social dimension of public space will be augmented with environmental features to help communities cope with climate change's effects and contribute to reducing their ecological footprint. The overarching axiology of the proposed project is to pursue concrete adaptation actions based on 3 (three) strategic goals, (1) resilience; (2) response; and (3) recovery. Through these actions, a broad systems-level adaptation strategy will be achieved by thinking globally and acting locally (glocal). The project will address the social impact of floods on urban communities, engage with several hazards induced by climate change, and prioritize flood adaptation by constructing one pilot public space. It is anticipated that knowledge generated from this project will be replicable in other cities in Indonesia and internationally. The knowledge can be adapted and tailored to other communities with similar environmental changes due to climate change.

The introduction of the project organizes through both online and offline meetings. The first was through the online was organized on November 21rd, 2022. And second, was the offline kick-off on December 6th, 2022, attended by the Mayor of Samarinda. It consists of an introduction session to the project, the city's condition, and the National Policy on Climate Change Adaptation.

## 1. Overview

The challenges of Indonesia today and in the future regarding climate change adaptation must focus on local preparedness through establishing clear strategies, information, and measurable outcomes. This is achievable only if the tasks and functions of each sector are understood through a spirit of collaboration between different government sectors, agencies, and local communities. This project proposes a new typology of public space for the Indonesian context – focused on people-centered development – addressing climate change through a coordinated and integrated approach. This new type of public space will strategically address multiple current issues experienced by local Indonesian communities. Current strategies and policies aim to reduce the effect of climate change, minimize the impact of development on local environments and prepare communities for future extreme weather events and environmental hazards<sup>1</sup>. Redefining settlement patterns in Indonesian cities through an integrated and interconnected network of multiple public spaces will improve living conditions and well-being for local communities while proactively tackling the urgent issue of climate change. This aims to generate positive momentum that improves environments and ecosystems alongside sustainable urban development.

Building upon the concept of the Positive Development paradigm<sup>2</sup>, the project aims to create an innovative public space that could support resilience building in the pilot area within Samarinda City by reducing the community's vulnerability to flooding and the subsequent flood risks. The positive development paradigm promotes building solutions and techniques that improve the quality of the environment, harvest resources sustainably, and positive externalities to the ecological landscape in the vicinity. All with the primary intention of improving the overall network performance of systems in different fields. This perspective manifested in the project as a climate-resilient public space structure with mix-use functions to complement its primary role as a flood shelter.

Key priorities for the project include solutions and education about (1) flood and drought; (2) access to clean water; (3) access to reliable energy sources; (4) community vulnerability and safety; (5) food security; and, (6) waste management. Each designed public space will encourage the local community to engage with the six key priorities. They will provide access to essential resources such as clean water, food, and energy, as educational opportunities to learn about sustainability and demonstrate how to reduce climate change impacts. The structure's features are developed based on five key elements that need to be provided by the public space: water, energy, materials, social and green. Community resilience and flood management as the umbrella are then translated into physical features that include a detention pond and rainwater harvesting (RWH) to control surface runoff and provide alternative non-potable water resources. Micro-scale food production through urban farming, a waste management facility that promotes recycling to reduce illegal waste disposal. A solar panel as an alternative off-grid power source, green infrastructure for microclimate control, a market space area to boost economic conditions, and the

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<sup>1</sup> Santos Nouri, A., & Costa, J. P. (2017). Placemaking and climate change adaptation: new qualitative and quantitative considerations for the "Place Diagram". *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 10(3), 356-382. DOI: 10.1080/17549175.2017.1295096

<sup>2</sup> Birkeland, J. (2008). *Positive development: from vicious circles to virtuous cycles through built environment design*. London: Earthscan.

most prominent feature will be a community hub space that would enable social interaction. At the same time, it also serves as a sheltered area.

Aside from their regular function to provide additional basic service supply for day-to-day public space operations, RWH, solar panels, and urban farming will also allow the public space to be self-sufficient in the event there are disruptions to basic service provision from the local government. For instance, during a disaster emergency where water and electricity service is disrupted, communities that take shelter in the public space could still be served with off-grid clean water, food stocks, and electricity. Hence combining on-grid and off-grid basic service networks within the public space would help reduce the community's vulnerability to different hazards (not exclusively flood).

As a public space that targets the surrounding community as the primary users and benefactors, it is essential to create socially inclusive, culturally appropriate, and vibrant spaces that could positively impact the environment, not just the physical environment but also the social environment. This social context will be taken into account from the start of the project during the planning phase by employing a participatory planning process. The participatory process will also ensure that the structure is designed to incorporate features that respond to the community's needs and is user-friendly. This participatory process, complemented by training, will equip community members with adequate skills to operate and maintain the public space and its features. This will be part of the project's sustainability assurance. And more importantly, training will also be conducted on emergency preparedness and evacuation systems related to the shelter, including how to operate the shelter during an emergency and who will be the primary actors at that time.

## 2. Integrated Approach to Public Space Design and Climate Change Adaptation

The proposed typology aims to create a space that will be socially inclusive, culturally appropriate, vibrant to support the local economy, and have physical attributes to positively impact the local environment while increasing climate resilience. The project will address the need to prepare and adapt local communities to flood hazards, it will focus on five key elements to achieve a successful public space typology: water, energy, materials, social, and green. Water management and harvesting, food production, processing and storage, waste management and biodiversity enhancement will be by-product of the interventions related to each of these elements. The resulting public space network will be realised with dispersed low-tech design intervention built-in the day-to-day practices of local government and citizens (some examples provided in figure 08). This approach aims to promote social inclusion and diversity by enhancing activities that target people from different genders, ages and ethnicities. High impact low cost interventions across one public space site will foster an integrated and Water Smart approach<sup>3</sup> to flood adaptation. The new public space typology will provide Samarinda with tangible adaptation strategies and tools including:

### (1) Resilience

- Public community space for markets, gatherings, play and education including shade structures.

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<sup>3</sup> Tsakalides, P., Panousopoulou, A., Tsagkatakis, G., & Montestruque, L. (2018). Smart water grids : a cyber-physical systems approach. Boca Raton, FL: CRC Press/Taylor & Francis Group.

- Solar power generation for mobile phone charging and lighting at night, ensuring passive surveillance of space at night and safe access for all members of the community.
- Perpetual access to clean safe water.
- Waste management

(2) Response

- Emergency distribution point for community access to crisis provisions, electricity for phone charging, sandbags etc.
- Access to reliable water and energy sources during a flood emergency.
- Evacuation and shelter management point for displaced people.

(3) Recovery

- Ongoing community resilience building following a flood event.

Briefly, the project will deliver:

- A palette of technologies and technological solution to inform the design of the pilot project, developed through a co-design approach with the interested communities.
- One pilot public space in Samarinda
- Design guidelines consist of a palette of low-cost high-impact design tactics to be implemented in time within the urban environment, so as to enhance flood water management and establish a cohesive network of interventions to manage floods through adaptation of existing public spaces and development of new ones.

The selected public space, identified in consultation with Samarinda City Government, will act as multipurpose spaces within the specific framework of being in the first instance designed to support local communities to adapt to floods not just in terms of physical response, and mainly focusing on the social response to flooding. Detailed design of the proposed public spaces and their locations will be negotiated with local government and local communities, on the basis of preliminary research, their main feature should anyway be:

- Sections of the public space have to act as a floodable landscape and work as a flood water retention basin during flood events. Flood water from surrounding areas has to flow to this space, where it can be safely managed. From the public space, water will be then safely managed through ground infiltration and discharge in the Mahakam River through a swale.
- The retention basin will be filled with sand during the dry season; residents will be able to collect this sand and sandbags from the public space to protect their houses ahead of the flood. Basically, the space will function as sand storage and local residents will be able to access sand stored here to form sandbags to protect their properties. The community will therefore actively engage in the management of the public space and its preparation towards a flood event.
- Low-tech tactics in existing and proposed public spaces, including streetscapes, will facilitate the management and dispersion of flood waters. The network of public spaces will direct flood water from high ground towards the proposed public space, which will act as a retention basin, and in the second instance from the public space to the river when it will be safe to do so.

- Rainwater will be harvested through shelter structures included in the space and stored in water tanks on site. Access to clean water will also be fundamental during the recovery phase of the flood as well as to support the day-to-day life of the community.
- The public space will be fitted with ancillary items to support the recovery and also the day-to-day life of the local communities. Wind turbines and solar panels will facilitate the production of affordable electricity. Access to an off-grid power source will be strategic for the recovery phase after the flood.
- Landscaping of the public space will be realized as an edible landscape. The inclusion of greenery will have positive effects on the local microclimate and provide access to green areas for the local community, with benefits for their mental health. The edible landscape will be a feature engaging the local community daily, through production and harvest of produce. This feature will also assist recovery providing access to fresh food or to mean to produce fresh food in the recovery phase of the flood.
- The public space will also be fitted with components for composting and wet waste management. Areas will be dedicated to safe recycling of materials and these materials will also be implemented to improve and expand this public space.
- The space will provide areas to support social entrepreneurship, with a specific focus on women and minorities.

Local citizens will be engaged in the design and construction of the proposed public spaces as a way to educate them in low-tech tactics to manage floods. It is hoped that by learning simple tactics to design open spaces so to be flood resistant and flood smart, citizens will be able to progressively improve the local urban landscape. Being engaged in the construction of the public spaces will enable participants to transfer into their broader community their learnings and to contribute to make their community more flood prepared through disperse, day-to-day interventions.

Participatory approaches, including community consultations will support community ownership of the project process and of the created spaces. A holistic approach to build climate resilience by making use of a range of physical urban elements such as water, green spaces, energy, sustainable materials and social dynamic will be employed. Consultative processes will be embedded in the project plan prior to nominating site/s and to ensure proposals are aligned with community and stakeholder priorities. At this stage, consultation has commenced with the local government of Samarinda and local stakeholders, who have provided the specific location for the intervention. Broader community consultation will be undertaken in the co-design phase of the program. Local community members will be engaged in providing ideas, sharing suggestions, and actively participate into the design of the space. This will be achieved through a series of workshop and collecting community data through situated installations, as well.

Site visit to the proposed public space site was also conducted during offline consultative meeting proces on July-August 2020. Based on meetings result and site visit, a location nearby Segiri Market was agreed to be the project site. Aside from its potential as public space/flood shelter location from flood risks perspective, the site also has positive value on how it has the potential to be aligned with Samarinda City development plan. The city government has initiatives that can be integrated into the project, such as the construction of retaining wall along Karang Mumus River as flood mitigation measures. The Samarinda City Mayor iterates his confidence that this particular project would bring added value to the city development.



Having agreed on the site location, informal discussion with local merchants in the market and youth community were then being done to assess how the project could contribute in addressing their concerns and build their resilience. The consultative activities show that socio-economic issues are highly embedded in the area. Community's resilience to climate change is highly depends on their socio-economic capacity, particularly for vulnerable groups such as the local merchant. Accordingly, these issues are taken as among the main priority to be addressed by the project.

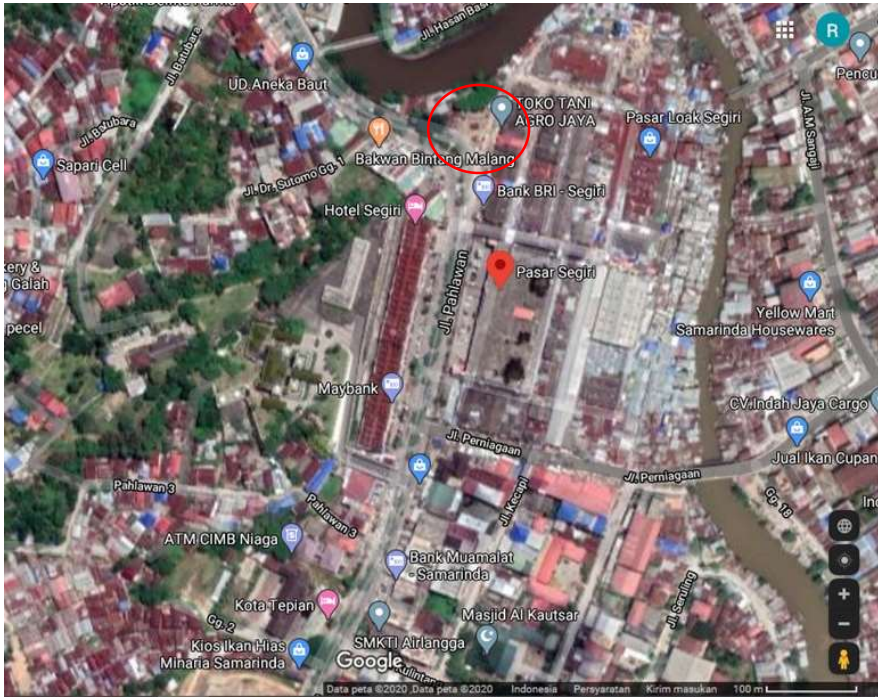


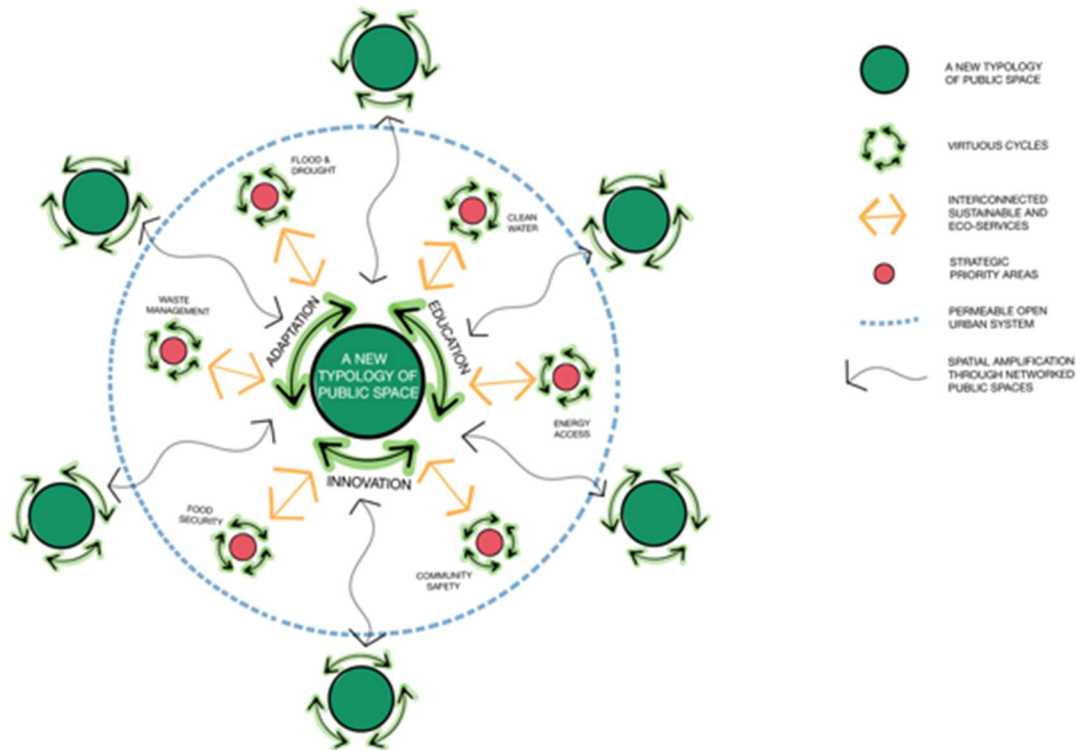
Figure 22. Segiri Market Observation



Figure 1. The Location condition nowadays

### 3. Measuring Impact

In order to evaluate the actual impact of the intervention on the local environment and the local community, a framework based on three intertwined areas will be adopted, these being (1) Adaptation; (2) Innovation; and (3) Education.



**Figure 2.** Conceptual diagram for the evaluation framework

In terms of **adaptation**, *Flood and Drought* are relevant issues for Samarinda; the project aims to manage flood water as well as harvest and store rainwater. The integrated system of public places intends to act as a water management system during floods. The proposed public space will be floodable landscapes and include retention basins, so to contain water during floods and reduce the impact on surrounding communities. The proposed public spaces will include storage for sand, to be used to fill sandbags; citizens will be able to freely access this resource in preparation to flood events. The 5C-4R measurement framework (or similar freely available tool) will be used to measure flood resilience<sup>4</sup>. During flood events, the performance of the proposed public space will be monitored to assess the effectiveness in retaining stormwater and reducing overland flow. In addition to this, the number of people using the space as a refuge during hazardous events will be measured. Access to Clean Water will be evaluated through the average quantity of water harvested and used for civic uses is used as an impact of the intervention in this field.

<sup>4</sup> <https://floodresilience.net/frmc>

Whilst flood adaptation is the main line of action of this project, the proposed public spaces will be designed so to address also a number of secondary outcomes. The strategic role that ecosystems play is recognised in the literature<sup>5</sup>. While forestation is adopted in rural setting as a strategy for carbon sequestration, within urban environments public spaces can play a fundamental role to reduce CO<sub>2</sub> emissions and provide opportunities to sink carbon. Thinking of public spaces as part of an integrated ecological system can provide concrete and measurable indicators for climate adaptation. The biomass of the vegetation integrated in the proposed new typology of public space can provide a quantitative measure of carbon reduction. A first indicator of the impact of the project therefore is the variation in the biomass of vegetation in the areas of intervention. Corollary from this indicator is the measurement of vegetation canopy; the project aims to increase the average shaded area in the location. A longitudinal record of temperature in selected points will also be used to measure the impact on the urban heat island.

Wind turbines and solar panels are included in the concept design for the new typology of public space; the *average power produced* by the intervention will address *Access to Reliable Energy Sources* as well as contribute to reduce CO<sub>2</sub> emissions providing a reliable alternative to fossil fuel combustion.

Community resilience will be fostered by engaging community groups and community members in every stage of the project. Impact on *Community Vulnerability and Safety* will be assessed, measuring daily use of the public space and their engagement in the activities afforded by the structure. Data will be collected through *survey tools* and “*counters*” to collect quantitative data on the number of people using the spaces. A longitudinal research study measuring attitudes and beliefs about climate change in the local community will also be implemented through a survey of the general population. Statistical data will also be used to evaluate a longitudinal impact on the citizens’ livability (health improvements, energy consumption, infant mortality rates, water-borne disease, and hospital admissions).

*Food production* is a key component of the new typology of public space. Food will be produced in situ, and facilities such as communal kitchens will also guarantee that the public space can also be used to process food. Markets are also planned as one of the social activity for the pace. The quantity of food produced in situ will be monitored as well as citizens’ use of the communal facility for social uses.

The proposed public space will act as a community hub where suitable waste is collected and recycled. The quantity of waste recycled in situ and the potential economic profit from this activity will also be monitored. As is common in several Indonesian Kampong, recycling can form the basis of a flourishing commercial activity where new artefacts are produced recycling and reusing waste.

In terms of **Innovation**, impact in this field is assessed measuring the ability of a system to produce a steady stream of opportunities. The replicability of the solutions adopted in the new typology of public space will be assessed through focus groups with residents and stakeholders. The project will also be proposed for independent scrutiny via academic publications and conference presentations. Community members participating in these construction and development of the new typology will be engaged in devising innovative solutions to achieve climate adaptation through low-tech approaches. Solutions developed during the process will provide participants with know-how that can be applied to start-ups or other medium scale enterprise. The new public space is intended to foster social entrepreneurship, so the economic system generated by the new space will be monitored and measured (number of start-ups, co-

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<sup>5</sup>Morecroft, M. D., Duffield, S., Harley, M., Pearce-Higgins, J. W., Stevens, N., Watts, O., & Whitaker, J. (2019). Measuring the success of climate change adaptation and mitigation in terrestrial ecosystems. *Science*, 366(6471), eaaw9256. doi: 10.1126/science.aaw9256

working opportunities, commercial activities). The engagement of some disadvantaged stakeholders such as women or those with a disability will also be an important indicator of the impact of the innovation component of the project. The Suanluang 1 community in Bangkok is an example of food markets organized and driven by women; the new public space will afford women agency to grow and cook food as well as to start other small commercial activities, taking advantage of the structure of the space.

In terms of **Education**, the planning, design and construction of the new typology is envisaged as an opportunity to train locals in a number of skills. The focus of the project will be on recycling and reusing materials with a low-tech approach to mimic the performance of the public space at a domestic scale. Participants in the project will learn about water harvesting, water sensitive planting, energy generation, and building techniques that can be transferred to domestic environments. The number of participants to the process will be monitored to assess how learnings from this experience have impacted daily lives and employability. Entry and exit surveys will also ensure measurement of the impact of the learning experience on participants. The new typology of public space is also designed to be a learning space; schools will be monitored and surveyed to assess how they engage with the space in terms of their formal and informal learning.

These are preliminary indicators to monitor the project and assess its impact; more specific indicators will be negotiated also with the local community so that they can be the main actors to manage, monitor and assess how the new typology responds to their needs, and the needs of climate adaptation. The program is intended to operate according to a dual benefit model, using materials and construction methods typical of public space. E.g. soft and hard landscaping and rudimentary shelter structures for ordinary use. Through considered design, these will function effectively during periods of flood, serving to both shield water flow from areas of the site while retaining water in other parts to protect surrounding areas.

In its current development state, the project directly addresses the following Sustainable development goals:

- **SDG3 Good Health and Wellbeing**

*3d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks*

- **SDG5 Gender Equality**

*5.1. End all forms of discrimination against all women and girls everywhere.*

- **SDG 6 Clean Water and Sanitation**

*6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all*

*6b: Support and strengthen the participation of local communities in improving water and sanitation management*

- **SDG 7 Affordable and Clean Energy**

*7.1 By 2030, ensure universal access to affordable, reliable and modern energy services*

*7.2 By 2030, increase substantially the share of renewable energy in the global energy mix*

- **SDG 9 Build Resilient Infrastructure**

*9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all*

- **SDG 11 Sustainable Cities and Communities**

*11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations*

*11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities*

*11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels*

▪ **SDG 13 Climate Action**

*13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries*

*13.2 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning*

## 4. PROJECT/PROGRAMMES COMPONENTS

The components of this project are:

### *Component 1:*

The first component of the program will be the theoretical development of this new typology, the parameters, characteristics and specification of this new type of space will be based on an analysis and review of case studies, researches, technologies, tactics, and solutions that have been or are suggested as potentially strategic to support Positive Development. The innovative component of this program sits in the potential of the new typology to be applied to different contexts and be implemented in other cities at least in the Asia-Pacific region.

Public spaces are at the center of communities. Indonesia today is experiencing a change of meaning in traditional public spaces and a general undersupply of community spaces. Top-down developments often focus on specific infrastructures, like sport facilities and playgrounds, and generally lack informal public spaces that can be appropriated by communities. Bottom-up projects often limit to retrofit existing spaces and beautify available spaces, which often do not have the characteristics to host proper community activity and needs.

The first phase of the program will analyze and evaluate the broader Indonesian context and formulate a new type in the form of a series of design guidelines, implementation processes, and spatial layouts to provide communities with a social communal space, as well as an integrated system to equip citizens to cope with climate change and environmental hazards.

From the environmental point of view, the new typology will have to deal with:

- Water management and harvesting. Access to clean drinkable water, stormwater management, sewerage organization, water storage and utilization are all emergent issues in a society experiencing more and more extreme weather events. Current solutions, tactics and technologies will be gathered and evaluated so to develop a model that would afford communities with an infrastructure to provide them with clean water; minimize pollutants released in the environment, harvest water for domestic and agricultural uses. In selecting technologies and tactics, preference will be given to passive technologies, to solutions relaying on integrated environments, where plants can be used in the management of natural resources. Several case studies developed in Europe and North America have successfully demonstrated how plants and planting can be used to manage urban water system, urban pollutants, and mitigate effect of climate change. This program will evaluate the principles of these case studies and develop a series of guidelines suitable for the Indonesian context, in terms of plants selections as well as cultural relevance of the solutions proposed.

*This component of the program will provide a positive impact on the community resilience providing access to drinkable water. It will also provide a positive impact on the broader environment reducing the release of pollutants in streams and creeks. The use of vegetation will mitigate urban heat island and contribute to the local microclimate.*
- Energy production. It is recognized how access to reliable and renewable energy sources is essential to support community growth and contrast the effect of climate change. This program will evaluate low tech solutions to produce and distribute energy to communities, potentially providing also communities with a source of income selling energy surplus to other areas. Solar panels, whirlpool turbines, and wind turbines are some of the technologies that will be explored to produce electricity locally, in conjunction to batteries and other system to store power.

*This component of the program will reduce communities' reliance on fossil fuels and reduce carbon emission in the environment. From the social point of view, it will provide communities with a reliable and cheap source of energy to support their viability and growth.*
- Food production, processing and storage. The strategic use of vegetation to manage water systems will also be extended to cover food production. Several communities in Indonesia are already pursuing with success urban agriculture on a small scale. This component of the program aims to achieve food security and self-sustainability for the communities involved. Different technologies and solutions will be reviewed, such as community gardens, hydroponics, green walls and green roofs. The aim of the program is also to provide community with common spaces where to process harvest together and store produce for community consumption.

*This component of the program will address not only food security, will also address climate change in terms of mitigation of urban heat island. The extensive use of vegetation in the proposed new typology will allow to store carbon and reduce heat reflected by hard surfaces. Food production and processing will also allow to enhance spirit of community, preserve communities' traditional practice and provide a stream for local commercial growth.*
- Waste management. Indonesia is successfully adopting the model Reduce-Reuse-Recycle. This component of the program will stretch the potential of this approach to identify techniques and tactics to create building materials from waste. Some projects have already successfully recycled paper and plastic for the production of bricks, then used in the construction of small buildings. This tactic will be evaluated in the context of the Indonesian society and the process commenced with the construction of the new propose public space, which is envisioned as built with mainly recycled materials.

*This component of the program addressed climate change in terms of reduction of pollutants in current ecosystems, encouraging reuse and recycle will also limit emissions and provide communities with a potential source of income linked to the production of building materials.*

- Economic viability. The first phase of the program will identify synergies and tactics to support community growth and development. A first set of activities will be linked to the construction of the new public space. Community members will be involved in the actual construction so to learn new techniques and new skills that they can then use in their future life. A pillar of the project is the empowerment of the community, so skills development through the entire process will be fundamentals. Participants will learn how to process waste to produce building materials, how to build structures, how to deal with urban food production and processing. A variety of skills will be offered to the community. This would allow participants options about their future life and the community different sources of income.

*This component of the program will address climate change through education and training. Participants will learn a set of skills aimed to achieve a sustainable positive development. Empowering communities with different kinds of knowledge will also allow them a better agency on their lifestyle and future development. Today many communities in Indonesia are focusing on tourism as the predominant source of income, this is anyway not realistic or viable, and so it is strategic that one of the outcomes of the project is providing communities with alternative options and economic models.*

- Community resilience. Sense of community will be enhanced through the participatory process of the program. Communities will be requested to provide their input in the design, development and construction of the new public spaces. In the development of Phase 01 guidelines and models, community members will also be consulted so to include provision for cultural symbols and meanings, social practices and communities' aspirations.

*This component of the program stretches from phase 01 to phase 02. In phase 01, communities will be consulted to finalize the model of new public space, incorporating their aspirations, social practices and cultural values. In the second phase of the project, co-creation will allow communities to have agency on their space and develop a sense of attachment to the new public space proposed.*

- The first component will include activities UNTAG and QUT joint activities, as well as some specific components developed by QUT:
  - Two Workshops with experts to inform the design phase of the project and gather data on best practice. This activity will be organized by UNTAG with QUT staff attending the event.
  - Tool and Method Development | this activity includes desktop research, literature review, contextual review, review of relevant technologies, Research and Development (R & D), prototyping, and preliminary design of components to include in the design of the pilot public space. This activity will be developed by QUT with input from UNTAG.
  - Methodology development | this activity covers the development of a methodology integrating mobile technologies and situated installation for community engagement (InstaBooth) to involve local communities in the design and construction of the new public space. The InstaBooth77 is an approach to community engagement developed at QUT since 2012 and applied in a number of different contexts in Australia, USA, China, Malaysia, and South America. This approach allows community members to

engage in an asynchronous debate about emerging topics, provide feedback, share ideas, and develop original contents to inform planning, design and policy developments. This methodology has been successfully applied to a number of projects commissioned by the Queensland Government, community groups, as well as leading industry partners. The InstaBooth is a mobile installation that allows participants to engage with a number of different components, to suit interests and attitudes of different community members. The InstaBooth is a key component in data collection and idea generation for the co-creation phase of the project. Prior to each project, the InstaBooth is customized and partially redesigned to suit the needs of the specific community. This activity will be developed by QUT with input from UNTAG.

## *Component 2:*

As mentioned under sub-section Focus of the proposal, the second component of the program is organized in two stages and is based in Samarinda City. Locations of the specific locations for the intervention, one (1) new public space, is being discussed and negotiated with local government, stakeholders and communities.

Selected communities within Samarinda City will be identified to pilot the new typology of public space. The pilot will be structured as a co-creation process:

- The community will be engaged in mapping their neighborhood. Opportunities, challenges, conflicts, and possibilities will be recorded, through workshops and deployment of the InstaBooth;
- Public workshops will run to discuss ideas, locations and aspirations of the community. The guidelines developed in phase 01 will be discussed and scenarios for their implementation negotiated with the different stakeholders;
- The project for the physical new public space will be developed with the community support by a local professional who will ensure compliance to local legislation as well as provide creative input in the process;
- The community will be then engaged in the actual development of the project. In some cases, this case, the land acquisition and location will be necessary as well as changes in the urban form provided by the City Government of the neighborhood Samarinda based on the recommendation and assessment so that the project will have to be negotiated in line with the city development plan and strategy. The new public space is meant to be a generator for the new physicality of the space as well as its identity, so as part of the development of the public space, plans for the future development of the neighborhood will be negotiated;
- The physical construction of the space will be done engaging professionals as well as members of the community. This approach is to ensure that community members can learn a set of skills during the process and aspire to future professional opportunities;
- Once the project has been completed, the community will take charge of running and managing the public space. Apart from events and festivals, stress will be put on everyday activities to make the space dynamic, livable and sustainable.



The second phase of the second component will take place during and after construction of the infrastructure. It aims to engage community members in the construction, activation and management of the new public space through a series of workshops and pop-up events.

The continuous engagement of community in each phase of the process will ensure a sense of ownership for the new public space. The importance of engaging the community in developing everyday activity in this new space will be strategic for the success of the program. The new typology of public space will have to be a space where to gather, work, play, and learn in a community setting. Participation methods are chosen because, in these phases, the community can involve in the planning and development process that is essential to the project implementation. This activity will trigger strong relationships with space and place.

This component will be coordinated by UNTAG; QUT will provide material, data and support to be used in the workshops. QUT personnel will also aid UNTAG staff in running the co-creation workshops.

The second component of the project is the actual construction of the infrastructure. The construction of the new public space will involve a survey of the current urban form and its potential reorganization. The local communities will be engaged in a discussion about their future social, environmental, physical, and economic outlook. The proposed process might involve land acquisition, relocation of some activities, new constructions and demolitions of existing buildings. Where necessary, the community will work together in building new dwellings, infrastructures and resources to benefit the entire community. Surpassing the fragmented and individualistic approach of traditional western zoning, the program suggests a community approach to the development of neighborhoods. With the aid of experts, communities will implement guidelines and tactics developed as a new typology of public space to gain control and agency on their own environment. Regaining the traditional approach to urban development as a coordination and collaboration between citizens and communities, this program will promote in the medium-long term changes to urban form to achieve a city that could better respond to the current challenges of climate change. This component will be coordinated by UNTAG; QUT personnel will also aid UNTAG staff in running this component.

### *Component 3:*

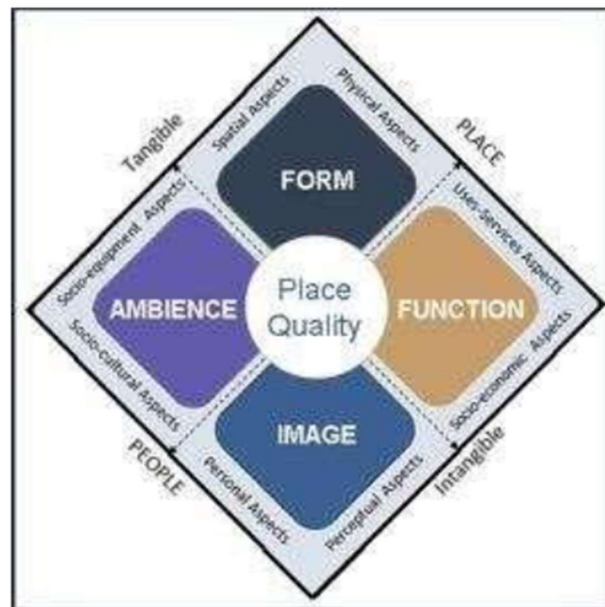
The third component of the program will deal with divulgation of the experience and learnings. Training will be organized for designers, government officials and community leaders, so to create awareness about the new typology of public space proposed; its principles, its applicability to different contexts. In parallel, publications and event will be organized to publicize the program, its findings and educate the broader community.

Sharing and divulgating the findings of the program and its achievement will allow other communities to gain agency on their urban form, to gain an awareness of the potential of public space in terms of building positive, sustainable, resilient communities and structure urban form in a more sustainable and responsive way.

UNTAG will lead this component with QUT input in the development of training and resources for government officials. QUT will lead the development of academic papers to publicize the project and its outcomes.

#### Component 4:

The fourth component of the program will deal with the assessment and monitoring of the interventions. In order to evaluate the impact and effectiveness of the new public spaces developed as well as of the system of public spaces that they will generate, qualitative and quantitative data will be collected before the construction of the new public spaces; at completion of the construction, two year after completion of the construction. The method to collect data and assess the impact of the interventions will be based on the following place quality framework:



. Place Quality Framework, based on Pancholi, Yigitcanlar, Guaralda (2018)

**Figure 2a.** Place Quality Framework

This framework considers tangible and intangible characteristics of place and it is articulated in a number of specific sub-indicators to specifically assess performance of public spaces in terms of their contribution to the overall urban form, economic sustainability, social dynamics, as well as experiential and cultural components. This framework will be used to monitor the impact of the intervention collecting statistical data, economic indicators, and assessing the performance of the public spaces in terms of community usage and perception, through surveys and site observations.

This component will be supervised by UNTAG, while QUT will lead publications to publicize the project and its findings.

In summary, this project aims to address specific climate change dynamics typical of Indonesia and relevant also for other geographical areas with similar challenges. The proposed new typology of public space, developed so to generate an integrated system of public spaces and will contribute to prepare Indonesian people to face the hazards of climate change through different tactics, strategies, and processes.

Table 1: Embracing The Sun’s Project Framework

COMPONENT	OUTCOME	OUTPUT	ACTIVITY	SUB-ACTIVITY
1 - Research and development on city-wide adaptation to climate change through public spaces	Outcome 1.1 Increased urban resilience through the development of a new public space typology and guidelines that can inform planning processes at the city-level	1.1.1. Research conducted on climate-resilient public spaces, including best practices and lessons learned within the Asia-Pacific Region, and South-East cities in particular	1.1.1.1 Re-Thinking Public Space Typologies for Urban Climate Adaptation	A. High level kick off round table for Urban Climate Adaptation
				B. Discussion and Workshop with UN - Habitat Global Public Space Programme (Nairobi) and Block-By-Block Foundation
				C. Discussion and Workshop with Pratt Institute New York and Project For Public Space
				D. Tool and Method Development at QUT
		1.1.2. Assessment tool and methodology for the evaluation of climate-resilient public spaces developed	1.1.2.1 Formulating tool and methodology to become user friendly	E. Integrating tools and apps development at QUT
		1.1.3. Public space guidelines, incorporating new typologies that can be used as a best practice for replication	1.1.3.1 Tools and Methods Finalization	F. Guideline preparation
2. Awareness raising and local resilience strengthening through the design and implementation of a new public space typology	Outcome 2.1 Increased awareness and ownership of design processes	2.1.1. Community profiling developed for targeted location in the City of Samarinda	2.1.1.1 Community engagement	G. Need assesment and group discussion
		2.1.2. Targeted communities are engaged in design processes through a participatory approach (e.g. workshops, interactive debates, etc.), focused on climate-resilient public spaces	2.1.2.1 Community engagement	H. Participatory Design Workshop
				I. Detail Engineering Design and BOQ Development
	Outcome 2.2 Community-based infrastructure developed resulting in a strengthened adaptive capacity	2.2.1. Climate-resilient public space is co-developed and built in the selected communities (in the city of Samarinda) based on previous findings	2.2.1.1 Development of Climate Resilient Public Space	J. Construction of public space that would include: <b>Rooftop:</b> Solar panel and wind turbine Urban farming (and at building envelope) <b>Upper level:</b> Flood shelter Community hub and daycare Collection points for emergency needs (sandbags, tarps etc) <b>Mezzanine level:</b> Storage facility for market Rainwater storage Sanitation facility <b>Ground level:</b>

COMPONENT	OUTCOME	OUTPUT	ACTIVITY	SUB-ACTIVITY
				Floodable ground floor that used as market and playground in normal condition
				Benches and risen platform beds (as walkways during flood)
				Sand storage
				Retention pond
				Waste collection and recycling point (including composting area)
				Green infrastructure
		2.2.2. Community groups are established, based on existing governance structures (if present), to ensure adequate maintenance of the public spaces	2.2.2.1 Community organizing	K. Community maintenance training
<b>3. Capacity building, knowledge management and communication</b>	Outcome 3.1 Increased capacity at the city- and community-levels on climate-resilient strategies and design options for public spaces	3.1.1. Training for community groups to divulgate findings of the project and methodology of the intervention	3.1.1.1 Community Training	L. Training for community about adaptation in the new develop Public Space
		3.1.2. Training for government officials in key sectors (e.g. planning departments) on project findings, methodologies and approaches applied for replication	3.1.2.1 Official Training	M. Training for city officials about project findings and replication
	Outcome 3.2 Knowledge sharing and increased awareness on project results among targeted audience (communities, governmental bodies, general public)	3.2.1. Lessons learned and best practices on climate-resilient public spaces and community adaptive capacity building are captured and disseminated for regional replication	3.2.1.1 Dissemination	N. Book Publishing
				O. Video Publishing
				P. International Seminar
<b>4. Monitoring</b>	Outcome 4.1 Increased understanding and awareness of the impact of the intervention	4.1.1 Evaluation of place quality before the intervention, at completion of the intervention, and two years after the completion of the interventions	4.1.1.1 Evaluation Pre, Post and Impact	Q. Project Monitoring and Evaluation

## 5. Inception Phase

The inception phase of Embracing the Sun – Project, started on June 20<sup>th</sup>, 2022 and ended on November 21<sup>rd</sup>, 2022. Before the inception phase, there are several activities as follows:

1. Maintain communication and coordination with the Municipal Government of Samarinda City, especially for site designation for the project
2. Site visit to collect and observe update on the Site development
3. Serial meeting with the group of experts and CSO, especially with Gender Informal leader to have Gender analysis perfectly.

That's all to be done because then it needed to be well maintained as preliminary data for pre award survey dan preparation for Community Engagement Strategy model, which conduct at the inception phase. The inception phase activities are:

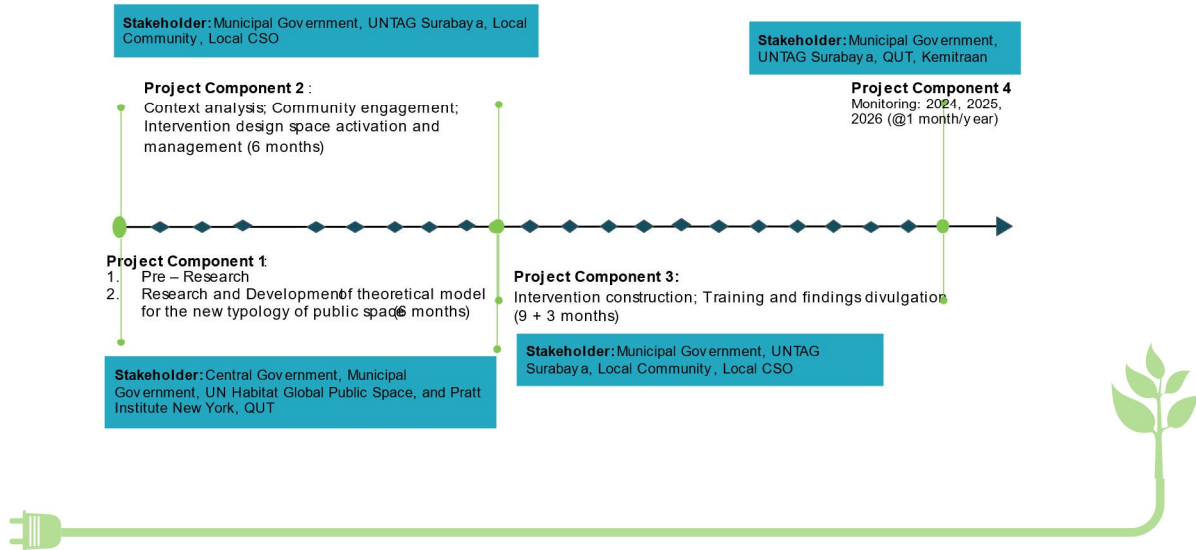
1. Maintain communication and coordination with the Municipal Government of Samarinda City by online for updating the site development and Samarinda development in general.
2. Maintain communication and coordination with the QUT Team by online for preparing pre research data.
3. Maintain communication and coordination with Kemitraan by online for CeCUR administration completion

### 5.1. Online Communication and coordination with the Municipal Government of Samarinda City

Establishing intense communication and coordination with the Samarinda city government is very important. The main thing is for updating the site development and Samarinda development in general to harmonize the programs and activities managed by the municipality that are aligned with this project. The several communication and coordination have been done by online for efficient and effectiveness result. After the project kick-off, further coordination was held for the community engagement stage.

Referring to the timeline, after the project kick-off, it should start the Research and development phase on city-wide adaptation to climate change through public spaces, but due to research administrative matters that still have to be completed by Queensland University of Technology, then in this phase, Research and development has not been able to run perfectly. However, the team carried out pre-research activity which was implemented simultaneously with the community engagement phase. Thus, in this inception phase, the data for the pre research has to be well manage for supporting the Research and development phase. Then, the timeline will be re adjustment, because the component 1 runs simultaneously with the component 2. This re-adjustment will not make any change for financial arrangement, because the data and all pre award research needs have been prepared at the inception phase.

## Timeline and Stakeholder (re-adjustment)



**Figure 3.** Timeline re-adjustment

To observe more intensely the development of the project site and its environment, the team decided to assign staff who would stay in Samarinda during the project. Thus, at this inception phase, more complete data can be collected related to the environment, social, economic and cultural communities around the site, as well as see more clearly the role of the site in the development of the area. Data related to the project site is important data needed for the Research and development phase.

Stakeholder engagement process is crucial for the implementation of this particular project that focusing on creating a socially inclusive public space by employing participatory design approach. To make this engagement process worthwhile and provide optimum support to project's achievement, it needs to develop a Stakeholder Engagement Plan (SEP) early in inception phase that've done by online.

A stakeholder mapping activity needs to be carried out to identify all project stakeholders, including gender groups and those considered as marginalized and vulnerable groups. The stakeholders can be broadly categorized into four groups based on their potential areas of concerns:

- a. Environmental – this would include stakeholders that can be directly and indirectly affected from potential degradation of current environmental conditions such as downstream community that can be affected by decreases of surface and groundwater quality from building construction, surrounding community that disrupted from enhances noise/disturbance level during construction and operation of public space, etc.
- b. Social – this would include people/groups that are directly and indirectly involved in- and affected by the project on socio-economic aspect. Those directly affected might include current wet market local merchant that provided with opportunity to move to a new market, surrounding community (including vulnerable groups) that are at risk from flooding that is equipped with flood

shelter and new evacuation system, groups that can access sociopreneur activity etc. While those indirect stakeholders may not directly be involved in public space operations, but may have concerns on community safety on the shelter, employment of temporary workers for construction, economic development opportunity in sociopreneur activity, recruitment issue, traffic issue due to public space construction process, and others.

- c. Institutional – this would include stakeholders that can positively and negatively influence the project from institutional context. Among the potential stakeholders are: Samarinda City Agencies (Bappeda, BPBD, DLH) and their regulatory framework, key community actor/leader that could influence community's acceptance and willingness to participate in the project, local Civil Society Organization, and others.
- d. Technical – this would include stakeholders that may not directly and indirectly affected by the project, but their involvement is needed by the project, such as those related to materials supply and feasibility, traffic safety and management, project management context, etc.

All representations from the stakeholders mentioned above, have been invited and attended the kick-off project both online and offline. Thus, they have been well informed about the project and its activities. At the kick-off of the offline project, the team also had the opportunity to discuss with several stake holders to see various possibilities to hold a further coordination on the inception stage.

## 5.2. Serial online meetings with the QUT Team

At the inception phase, it has been done several intense communication and coordination with the QUT Team for ensuring the pre-research process. Several online discussions include the discussion about:

1. Instabooth design
2. Community Engagement Strategy
3. Public Space Precedent
4. Public Space Theories Update
5. Data Collecting and Categorizing

## 5.3. Maintain Online Communication and coordination with Kemitraan

At the inception phase, several administration documents also need to be done. Here, the role of Kemitraan is very important. The process has executed intensely, especially for administration document monitoring and evaluating process.

## 6. Project Kick-off

The first project kick-off was held online, on November 21<sup>st</sup>, 2022. The agenda that can be carried out in this activity is an explanation of The Sun Embracing project, an introduction to Adaptation Fund projects in Indonesia and about the role of partnerships in Adaptation Fund projects. The most important person which is The Mayor from Samarinda, as the host off the project, was unable to attend, because this event coincided with the implementation of the International Agenda. However, one of the officials from the Ministry of Environment and Forestry was present to participate in the discussion at the final session. Because of that, it is needed to have the second project kick-off that done by face-to-face method and present by The Samarinda Mayor.



**Figure 4.** The first project kick-off was held online, on November 21<sup>st</sup>, 2022

The second project kick-off was held offline at the Mangkupalas Room, Samarinda Mayor's Office, on December 6<sup>th</sup>, 2022. At this event, with the presence of all speakers and their representative, the agenda was held completely. Unfortunately, The General Director of Climate Change Control and The Director of Division of Climate Change Adaptation, General Director of Climate Change Control, from the Ministry of Environment and Forestry couldn't attend and send their representative to become the keynote speaker. The representative is Mrs. Nuraeni as Head of Sub-Division of Climate Change Adaptation, Directorate General of PPI, Ministry of Environment and Forestry.

The agenda that was carried out included the signing of an MoU between 3 parties: the Mayor of Samarinda, Executive Director of Partnership represented by Program Director for Sustainable Governance Strategic of the Partnership and Executive Director of CeCUR Untag Surabaya.



## 6.1. Kick-off meeting

The objective of the kick-off meeting was to introduce the project and to describe the implementation plan, as well as model of intervention to the key stakeholders of Samarinda City. General discussion and overview of the project implementation and intervention plans are parts of the agenda of this meeting. As agreed upon with the Municipal Government, the meeting was scheduled for 1 pm WITA (Middle Indonesia Time) on Desember 6<sup>th</sup>, 2022.

Attending the kick-off meeting from Samarinda City are the Mayor, the Municipal Secretary, Head of Regional People Assembly, Deputies and Head of related Municipal Department, among others:

1. Agency for regional development planning and development research Public Works and Spatial Planning Office,
2. Public Housing and Settlement Areas Office,
3. Environmental Office,
4. Collaboration Office,
5. Women Empowerment and Child Protection Office,

Several representatives of the targeted CSO (Civil Society Organization) were present, such as from:

- a. WALHI Kaltim,
- b. Duta Peduli Sampah,
- c. Mom's Preneur Kaltim,
- d. Deluga
- e. GGGI
- f. Konsorsium Peduli Pendidikan Lingkungan
- g. Gerakan Memungut Sehelai Sampah Sungai Karang Mumus.
- h. Setorplastik.com

Kemitraan's Program Director for Sustainable Governance Strategic and Project Team and representative from the Climate Change Adaptation Director, Ministry of Environment and Forestry were also joint as one of keynote speakers.

Several International Guest that presents online:

- (i) Mirko Guaralda (Faculty of Engineering, School of Architecture and Built Environment, Queensland University of Technology, Australia)
- (ii) Dan Nyandega (Faculty of Engineering, School of Architecture and Built Environment, Queensland University of Technology, Australia)
- (iii) Jose Chong (UN Habitat)
- (iv) Begoña Peiro (Harvard University)

The meeting started with an opening speech by the Executive Director of CeCUR, continued with Kemitraan's Program Director for Sustainable Governance Strategic and the Mayor of Samarinda City. The opening ceremony was closed with a speech by the Mayor of Samarinda City who finally declared the

official start of Embracing The Sun Project. After that, the next Agenda is the signing of an MoU between 3 parties: the Mayor of Samarinda, Executive Director of Partnership represented by Program Director for Sustainable Governance Strategic of the Partnership and Executive Director of CeCUR Untag Surabaya.



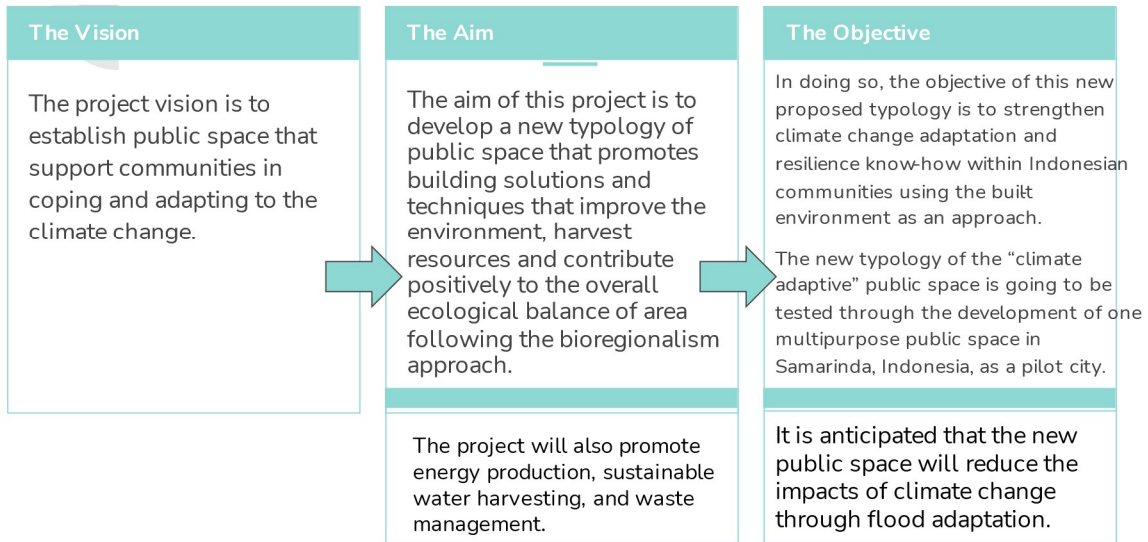
**Figure 5.** MoU Signing

## 6.2. Dissemination

### 6.2.1. Introduction to Embracing The Sun Project

In this first session, Prof. Mirko Gualarda from School of Architecture & Built Environment, Faculty of Engineering, Queensland University of Technology, that present online, presented the introduction to the Project of Embracing the Sun and explained the implementation arrangement to the attendants as described below:

# PROJECT BACKGROUND AND CONTEXT



## The new public space typology will provide Samarinda with tangible adaptation strategies and tools including:

Resilience	Response	Recovery
<ul style="list-style-type: none"> <li>- Public community space for markets, gatherings, play and education including shade structures.</li> <li>- Solar power generation for mobile phone charging and lighting at night, ensuring passive surveillance of space at night and safe access for all members of the community.</li> <li>- Perpetual access to clean safe water.</li> <li>- Waste management</li> </ul>	<ul style="list-style-type: none"> <li>- Emergency distribution point for community access to crisis provisions, electricity for phone charging, sandbags etc.</li> <li>- Access to reliable water and energy sources during a flood emergency.</li> <li>- Evacuation and shelter management point for displaced people.</li> </ul>	<ul style="list-style-type: none"> <li>- Ongoing community resilience building following a flood event.</li> </ul>

### Briefly, the project will deliver:

- A palette of technologies and technological solution to inform the design of the pilot project, developed through a co-design approach with the interested communities.
- One pilot public space in Samarinda
- Design guidelines consist of a palette of lowcost high-impact design tactics to be implemented in time within the urban environment, so as to enhance flood water management and establish a cohesive network of interventions to manage floods through adaptation of existing public spaces and development of new ones.

Project Component	Output
<b>Project Component 1 :</b> Development of theoretical model for the new typology of public space	1.1.1. Research conducted on climate-resilient public spaces, including best practices and lessons learned within the Asia-Pacific Region, and South-East cities in particular 1.1.2. Assessment tool and methodology for the evaluation of climate-resilient public spaces developed 1.1.3. Public space guidelines, incorporating new typologies that can be used as a best practice for replication
<b>Project Component 2 :</b> Context analysis; Community engagement; Intervention design space activation and management	2.1.1. Community profiling developed for targeted location in the City of Samarinda 2.1.2. Targeted communities are engaged in design processes through a participatory approach focused on climate-resilient public spaces 2.2.1. Climate-resilient public space is co-developed and built in the selected communities (in the city of Samarinda) based on previous findings 2.2.2. Community groups are established, based on existing governance structures, to ensure adequate maintenance of the public spaces
<b>Project Component 3 :</b> Intervention construction; Training and findings divulgation	3.1.1. Training for community groups to divulgate findings of the project and methodology of the intervention 3.1.2. Training for government officials in key sectors on project findings, methodologies and approaches applied for replication 3.2.1. Lessons learned and best practices on climate resilient public spaces and community adaptive capacity building are captured and disseminated for regional replication
<b>Project Component 4 :</b> Monitoring	4.1.1 Evaluation of place quality before the intervention, at completion of the intervention, and two years after the completion of the interventions

### 6.2.2. Samarinda City Government's innovation for improving the environment quality

In exchange, the representation of Samarinda's Environmental Office, RR Dyah Maharani, explained several innovations from the Samarinda City for improving the environment quality, such as:

- Kampung Proklam
- Sedekah Lingkungan
- Jeng Rinda

### 6.2.3. National Policy on Climate Change Adaptation

The next keynote speaker is ibu Nuraeni from Climate Change Adaptation Department of Climate Change Control Director General, Ministry of Environment and Forestry. She explained about the National Policy on Climate Change Adaptation, that closely related to the implementation of project. Some of her recommendation include:

1. The project funded by the Adaptation Fund in Samarinda city with the title: **Embracing the Sun: Redefining public Space as Solution for the effects of Climate Change in Indonesia's Urban Areas "** must support the achievement of the targets of the National Policy on Climate Change Adaptation with policy and program references: 1) NDC and Adaptation Roadmap, Presidential Regulation 98/2001, Technical Guidelines (PermenLHK no 33/2016 concerning Guidelines for the Preparation of Adaptation Action Plans and PermenLHK no 7/2018 concerning Guidelines for the Assessment of Vulnerability, Impacts and Risks of Climate Change Adaptation, 2) Using SIDIK data in facilitating the Preparation of Regional Climate Change Adaptation Plans; 3) Support the

achievement of the PROKLIM 2030 Target by registering the intervention location; and using the results of studies published by the Ministry of Environment and Forestry that are relevant to project activities and their location

2. Consult and coordinate with the local government of the activity site in the implementation of Project activities to ensure the sustainability of project benefits by implementing exit strategies as part of Project activities
3. Consult and coordinate with Technical Implementation Unit for Climate Change Control Kalimantan Region in the implementation of Project activities
4. Report the progress of the activity every 6 months to the Director General of Climate Change – Ministry of Environment and Forestry as NDA AF Indonesia and Technical Implementation Unit for Climate Change Control Kalimantan Region as Technical Implementation Unit In the Director general of Climate Change Control in the Kalimantan Region , Local Government and Director of Climate Change Adaptation

#### 6.2.4. Adaptation Fund in Indonesia

The last keynote speaker is Abimanyu Aji from Kemitraan’s Program Manager that explained about the Role of Kemitraan in Adaptation Fund Program, include in Embracing the Sun project, as Implementing Entity.

#### 6.2.5. Minutes of Meeting

The activity was held at the Samarinda Mayor's Office on December 6<sup>th</sup>, 2022 and was attended both online and offline. Participants consisted of relevant Regional Apparatus Organizations and non-governmental participants (CSOs) including journalists.

In the Discussion session guided by Oswar Mungkasa (Supervisor of the Center for Climate and Urban Resilience / CeCUR of Untag Surabaya), it was attended by panelists including

1. Mirko Guaralda and Daniel Nyandega (Faculty of Engineering, School of Architecture and Built Environment, Queensland University of Technology, Australia)
2. Jose Chong (UN Habitat)
3. Nuraeni (Head of Sub-Division of Climate Change Adaptation, Directorate General of PPI, Ministry of Environment and Forestry)
4. RR Dyah Maharani (Head of Environmental Management and Landscaping of Samarinda City)
5. Abimanyu Aji (Kemitraan’s Program Manager)

Also giving a brief response was Daniel Yandega (Queensland University, Australia).

In general, Embracing the Sun activity is interpreted as an effort to make the community a subject in handling climate change issues through the use of multi-purpose open public spaces that are beneficial for improving community welfare.

Embracing the Sun activity has at least three main approaches, namely (i) a positive approach, which is an effort that not only maintains the sustainability of an activity but even goes beyond resulting in improvements or improvements in the quality of the activity; (ii) the community as a subject, namely making the needs of the community the main input for the determination of the type of activity; (iii) circular public space, namely the use of public space to be productive and to maintain the service life of goods (e.g. the use of public space as a waste management site). In addition, the management of Embracing the Sun activities is multi-disciplinary by involving various scientific backgrounds, and knowledge.

The key success factors of Embracing the Sun activities are at least (i) collaboration which means involving various parties, both government (central and regional), private, high society, mass media and society; (ii) a stakeholder forum that may be a working group that serves as a forum for stakeholders in reaching consensus decisions/public policies; (iii) the application of knowledge management so that the output of The Sun Embracing activities is well documented and internalized planning documents; (iv) activities embracing the sun in synergy with similar activities both handled by the central and municipal governments of Samarinda; (v) the *exit strategy* has been agreed upon with all stakeholders since the beginning of the activity and not at the time towards the end of the activity.

## 7. Follow-up Plan

At the end of the kick-off event, it has a discussion with the Collaboration office team and agreed on a number of follow up action include to held some workshop with expected result:

- to receive inputs, comments and recommendations from the all stakeholder on any possible adjustment, modification or existing gaps to be addressed and integrated in the next phase. All results from this meeting will be collected, analysed and used as reference for further discussion in the immersion workshop planned to be conducted as follow-up for the project
- it is necessary to reveal as much information from the local Government on the adaptive action planned for the next years in terms of protecting the Karang Mumus River Waterfront of Samarinda City.
- All feedbacks, inputs and comments were collected for the project team to utilise for evaluation against the current goals and objectives of the current proposal.

Annex 1

Run-down Project Kick-off December 6<sup>th</sup>, 2022

<b>Time / WITA</b>	<b>Agenda</b>	<b>Keynote Sp/PIC</b>
13.00 – 14.00	Lunch and Registration	Committee
14.00 – 14.10	Opening	MC
14.10 – 14.20	Speech 1: Executive Director CeCUR	Dr. Ir. RA Retno Hastijanti, MT., IPU
14.20 – 14.30	Speech 2: Program Director for Sustainable Governance Strategic Kemitraan	Ibu Dewi Rizky
14.30 – 14.45	Speech 3: The Mayor of Samarinda	Dr. H. Andi Harun, S.T., S.H., M.Si.
14.45 – 15.00	MoU Signing: The Mayor of Samarinda, Executive Director of Partnership represented by Program Director for Sustainable Governance Strategic of the Partnership and Executive Director of CeCUR Untag Surabaya.	Bapak Walikota Samarinda: Dr. H. Andi Harun, S.T., S.H., M.Si. ;  Program Director for Sustainable Governance Strategic Kemitraan: Dewi Rizky;  Executive Director PSKIK/CeCUR: Dr. Ir. RA Retno Hastijanti, MT., IPU
15.00 – 15.30	Coffee Break	Committee
15.45 – 16.00	Keynote Speaker 1 “Embracing the Sun” presentation	Dr Mirko Guaralda (Ph.D., MHEd, DArch)
16.00 – 16.15	Keynote Speaker 2 Head of Sub-Division of Climate Change Adaptation, Directorate General of PPI, Ministry of Environment and Forestry	Ibu Nuraeni
16.30 – 16.45	Keynote Speaker 3 Head of Environmental Management and Landscaping of Samarinda City	RR Dyah Maharani
16.45 – 17.00	Keynote Speaker 4: Program Manager of Kemitraan	Bpk. Abimanyu Aji D
17.00 – 17.15	Discussion	Moderator: Bpk. Ozward Mungkasa
17.15 – 17.20	End	MC

Annex 2

List of Participants of Kick-Off Meeting online, November 23<sup>rd</sup>, 2022

<b>Nama</b>	<b>Instansi</b>
Sam Syaimun	PLT Asisten Ekonomi Pembangunan
Kardono	Kementerian Lingkungan Hidup dan Kehutanan
Juli Nurdiana	
Basuni	Dinas Lingkungan Hidup Kota Samarinda
Nurrahmani	Dinas Lingkungan Hidup Kota Samarinda
Hendrik S.	BI Kalimantan Timur
Iwan KH	
Rukmiyati	
Dika	Bagian Kerjasama Kota Samarinda
Eka Melisa	
Rukmiyati	Yayasan Bioma
Idfi Septiani	
Syaiful Anwar	Dinas Perumahan dan Kawasan Permukiman
Fida	dpupr samarinda
Dyah Catur	global green institute
Ladoe M. Syarif	Kemitraan
Dewi Rizki	Kemitraan
Abimanyu S. Aji	Kemitraan
Shabrina	Kemitraan
Adetya	Kemitraan
Ichwan	Kemitraan
Suci M.	Kemitraan
Yudha Utama	Kemitraan
Fadly	Kemitraan
Oswar Mungkasa	Pusat Studi Ketahanan Iklim dan Kota
Retno Hastijanti	Pusat Studi Ketahanan Iklim dan Kota
Mirko Guaralda	Queensland University of Technology
David A. Sagita	Pusat Studi Ketahanan Iklim dan Kota
Muhammad Faisal	Pusat Studi Ketahanan Iklim dan Kota
Khoudiy Iffiyah	Pusat Studi Ketahanan Iklim dan Kota
Andarita Rolalisasi	Pusat Studi Ketahanan Iklim dan Kota
Tanti	Pusat Studi Ketahanan Iklim dan Kota
Vika	Pusat Studi Ketahanan Iklim dan Kota
Ahmad Faisol	Pusat Studi Ketahanan Iklim dan Kota



Annex 3

List of Kick-off Participats in the Mangkupalas Room at Samarinda City



**PEMERINTAH KOTA SAMARINDA**  
**SEKRETARIAT DAERAH**

Jalan Kesuma Bangsa Nomor 82 Telepon (0541) 743036 (Protokol) Fax 731455  
SAMARINDA (KALIMANTAN TIMUR) KODE POS 75121

**DAFTAR HADIR**

Hari / Tanggal	: Selasa, 06 Desember 2022
Agenda	: Kick Off Implementasi proyek adaptasi Perubahan Iklim AF: Embracing the Sun: Redefining Public Space as a Solution for the Effects Of Global Climate Change in Indonesia's Urban Areas
Pukul	: 13.00- 17.20 WITA
Tempat	: Ruang Rapat Mangkupalas Gedung Balaikota Lt.2

No.	Instansi	Nama	Tanda tangan		No. HP
			Laki-laki	Perempuan	
1.	Walikota Samarinda	H. Andi Harun			
2.	Inspektur Daerah Kota Samarinda	Mas Andi Suprianto, S.E			
3.	Kepala Bappedalitbang Bid: PSTW	H. Ananta Fathurrozi ATMADAW			
4.	Kepala Dinas Lingkungan Hidup Kabid Tata Lingh. & Perumahan	Nurrahmani, SIP, MM AR. Dyah Maharani			0822-9218 1314.
5.	Kepala Dinas Pekerjaan Umum dan Tata Ruang Kota Samarinda	Desy Damayanti, ST, MT			
6.	Kepala Dinas Perumahan dan Permukiman Kota Samarinda	Herwan Rifa'i S.Sos, M.Si			
7.	Kepala Dinas Pemberdayaan dan Perempuan dan Perlindungan anak Kota Samarinda	H. Fitermen, SH, MM			
8.	Kepala Dinas Kependudukan dan Catatan Sipil Kota Samarinda	H. Abdullah, SH			
9.	Kepala Badan Penanggulangan Bencana Daerah Kota Samarinda	<del>XXXXXXXXXX</del>			
10.	Kepala Bagian Kerjasama	Idfi septiani, S.STP, M.Si			
11.	Kepala Bagian Protokol dan Komunikasi Pimpinan	Dinvi Kurniadi S.STP, M.Si			

12.	Yudi S	DLH	✓		
13.	AHMAD IRUWASYAH	DP2PA	uf		
14.	Fadara	POPK	<del>uf</del>		081400 7969
15.	Hatta Musthof	Polnes - Asistekt	<del>uf</del>		
16.	Iwan Harwidan	ektorplarhi.com	<del>uf</del>		081237 97617
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No.	Instansi	Nama	Tanda tangan		No. HP
			Laki-laki	Perempuan	
1.	Gubernur Kalimantan Timur	Dr. H. Isran Noor			
2.	Wakil Gubernur Kalimantan Timur	H. Hadi Mulyadi, S.Si			
3.	Sekretaris Daerah Provinsi Kalimantan Timur	Sri Wahyuni, S.STP			
4.	Kepala Dinas Lingkungan Hidup Provinsi Kalimantan Timur	Ir. E.A. Rafiddin Rizal			
5.	Dewan Daerah Perubahan Iklim Provinsi Kalimantan Timur				
6.	Bank Indonesia Perwakilan Kalimantan Timur	Muhammad Rais			
7.	Aris Pratawa	Dr. H. Kalthin			082198433067
8.	Wilma KF	-n-			0825851826
9.	MASTAN	BPBD			
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11.					
12.					











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No.	Instansi	Nama	Tanda tangan		No. HP
			Laki-laki	Perempuan	
1.	Geerakan Masyarakat Peduli Lingkungan				
2.	Wanita Peduli Lingkungan Kota Samarinda				
3.	Konsorsium Peduli Pendidikan Lingkungan	SRI.P			085363761457
4.	Aliasi Masyarakat Kota Samarinda Peduli lingkungan dan kesehatan				
5.	PEDALI				
6.	Earth Hours Community				
7.	Hilo Green Community				
8.	Koalisi Pemuda Hijau Indonesia				
9.	Gerakan Menjaga dan Merawat Parit				
10.	Gerakan Memungut sehelai sampah Sungai Karang Mumus				
11.	GGGI	Rahmayati			08115531782

	BIOMA	Jinnad Purwanto			08125845169
13.	Gerakan Masyarakat Peduli Lingkungan				
14.	Sertorplastic.com				
15.	Deluga	Agus. f			08227777 7335
16.	Moms Preneur Kaltim	Rahmalinda Barack			081281795975
17.	MediaLink				
18.	WALHI Kaltim	I Kadek Barus			
19.	JATAM				
20.	YAKN				
21.	Nor sama	Protokol			-
22.	Annisa Yasmin	Dirum Peduli Sampah			
23.	Idris Afandi,				
24.	DPD REI KALTIM	BAMBANG H. A			0852000.227-60
25.					
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27.					
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No.	Nama	Instansi	Tanda tangan		No. HP
			Laki-laki	Perempuan	
1.	Prodi Arsitektur, Fakultas Teknik Universitas Mulawarman	Universitas Mulawarman			082155304903
2.	Prodi Teknik Lingkungan, Fakultas Teknik Universitas Mulawarman	Forum Adm- KPS Tolenda Iykyan			085247419995
3.	Prodi Pembangunan Sosial, Fisip Universitas Mulawarman				
4.	Prodi Teknik Sipil Fakultas Teknik Universitas Mulawarman	Budi Haryanto			085247813671
5.	Prodi Arsitektur Bangunan Gedung, Politeknik Negeri Samarinda				
6.	Jurusan Teknik Sipil Politeknik Negeri Samarinda				
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No.	Instansi	Nama	Tanda tangan		No. HP
			Laki-laki	Perempuan	
1.	Ketua Dewan Perwakilan Rakyat Daerah Kota Samarinda	Abdul Fozik			081326435541
2.	Kapolres Kota Samarinda	TAWAN O.P			0812 2233 526
3.	Kepala Kejaksaan Negeri Kota Samarinda	Indria			081241374
4.	Dandim 0901 Kota Samarinda	Pt. Napitupulu			0821 1243 1102
5.	Direktur Program Dewi Rizki	Kemitran			0811 845 3112
6.	Program Manager Abimanyu S. Aji	KEMITRAAN			0821 6512 0204
7.	center for climate and urban resilience	DAVID A. SAGHA			0851-0800 1537
8.	Direktorat Adaptasi Perubahan Iklim KLTIC	Nuraeni			0813547 15249
9.	PSKIK	ASWAR MUNEKASA			0819088 23456
10.	PSKIK	Retno Hastijanti			0812318 3631
11.	PSKIK	MUHAMMAD FAISAL			081330 579098