

Gender into Urban Climate Change Initiatives (GUCCI) in Indonesia

Status Quo Report on Jakarta and Makassar

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Women are involved in climate change activities; yet, no gender-responsive urban climate change policies are in place

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Acronyms

AFOLU	Agriculture, Forestry and Other Land Use
APS	School Participation Rate
BLHD	Regional Environmental Management Agency
BAPPEDA	Regional Development Planning Agency
BAPPENAS	National Development Planning Agency
BPBD	Regional Disaster Management Agency
BPM	Community Empowerment Body
BPPA	Women and Children Empowerment Body
BPS	Central Statistics Bureau of Indonesia
BAU	Business as Usual
BPO	Ozone-Depleting Substances
BMKG	National Agency for Meteorology, Climatology and Geophysics
COP	Conference of the Parties
DPU	Public Works Office
DKP	Maritime and Fisheries Office
DKP3	Maritime, Fisheries, Agriculture and Livestocks Office
DNPI	National Council on Climate Change
DKI JAKARTA	Special Capital Region of Jakarta
DTRB	Spatial Planning and Building Office
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GUCCI	Gender into Urban Climate Change Initiative
GUCCII	Gender into Urban Climate Change Initiative in Indonesia
INDC	Intended Nationally Determinated Contribution
IPCC	Intergovernmental Panel on Climate Change
ITS	Intelligent Transportation System
JCDS	Jakarta Coastal Development Strategy
KLHK	Ministry of Environment and Forestry
LSM	Non-Government Organization

MoEF	Ministry of Environment and Forestry
MRV	Monitoring and Measurement, Reporting and Verification
NAPI	National Indonesia Climate Change Adaptation
NCICD	National Capital Integrated Coastal Development
POKJA	Working Group
PNPM	National Program for Community Empowerment
PAKLIM	Program Policy Advice for Environment and Climate Change
ProKlim	Climate Village Program
PUG	Gender Mainstreaming
PPN	National Development and Planning
PKK	Family Welfare Empowerment Movement
PDAM	Regional Water Company
PERMEN	Ministerial Decree
PERPRES	Presidential Decree
PERGUB	Governor Decree
PLN	National Electricity Company
PEP	Monitoring, Evaluation and Reporting
PJU LHE	Energy-Saving Street Lighting
PRB	Disaster Risk Reduction
PLTS	Solar-Powered Generator
RTH	Green Open Space
REDD+	Reducing Emissions from Deforestation and Degradation plus
RAN-GRK	National Action Plan for Reducing Greenhouse Gas Emissions
RAN-API	National Action Plan for Climate Change Adaptation
RAD-GRK	Regional Action Plan – Greenhouse Gases
RAD-API	Regional Action Plan – Climate Change Adaptation
RKP	Government's Work Plan
RKPD	Regional Government's Work Plan
RPJMN	National Mid-Term Development Plan
RPJMD	Regional Mid-Term Development Plan
SK	Decree

SKPD	Regional Administrative Working Unit
TPAK	Labor Force Participation Rate
TPT	Open Unemployment Rate
TPA	Landfill
UPM	Provincial Minimum Wage
UKL-UPL	Environmental Management Efforts – Environmental Monitoring Effort
UKP4	Presidential Working Unit for Development Supervision and Management
UNFCCC	United Nations Framework Convention on Climate Change
UU	Law

Preface

Indonesia's response to various agreements under the United Nations Framework Convention on Climate Change (UNFCCC) has led to the passing of a number of mitigation and adaptation policies and actions, both at national and regional levels, such as National Action Plan for Reducing Greenhouse Gas Emission (RAN GRK) and National Action Plan for Climate Change Adaptation (RAN API). Prior to the UNFCCC's Conference of the Parties (COP) 21 in Paris, the government of Indonesia had publicly expressed its commitment to adaptation and mitigation, i.e. Intended Nationally Determined Contribution (INDC), which calls for 29% emission reduction based on a Business as Usual (BAU) scenario, and 41% with international support.

Indonesia's actions for climate change mitigation and adaptation are to be done through a number of programs, both at national and regional levels, such as in Jakarta: (a) *Program Kampung Iklim* (Climate Village Program), (b) Transportation and Energy Sectors, and (c) the Giant Sea Wall, part of Jakarta Coastal Development Strategy (JCDS)/ National Capital Integrated Coastal Development (NCICD); and in Makassar: Mitigation Planning for Small Islands and Coastal Areas, Community Empowerment in Marine Resource Management, Improved Mitigation of Marine-Related Hazards and Marine Climate Prediction, Green Open Space, and Lorong Garden.

A number of national climate change policies also integrate gender aspects, among others: (a) Presidential Instruction No. 9 Year 2000 on Gender Mainstreaming In Development, (b) National Action Plan for Climate Change Adaptation (RAN API) 2014, (c) the National Development and Planning Ministry (PPN)/BAPPENAS's Paper Policy on Gender Mainstreaming In Responses To Climate Change, (d) Regulation of the Head of the National Disaster Management Agency No. 13 Year 2014 on Gender Mainstreaming in Disaster Management, and (e) Decree of the Minister of Forestry and Environment No. 19/ 2012 on Proklim (Climate Village Program).

In Makassar City, some of the urban policies aim to mainstream gender, and a number of city agencies have been created to mainstream gender in GHG emission reduction programs. Among the activities/programs in the policies are tree planting, monitoring of green open space, and Development of Climate Village (ProKlim), the RAN API program and Disaster Risk Mitigation.

As seen above, the government of Indonesia has two general policies relating to climate change and gender mainstreaming. How far these urban climate policies, which integrate gender considerations, would be effective, however, needs further analysis!

The importance of urban gender-responsive climate policies is to improve the resilience of women in particular and the general public, especially the urban poor and marginalized groups, in responding to the situations and threats posed by climate change. The urban poor are extremely vulnerable to climate change as they lack tools/means to respond to or avoid climate threats and hazards. Very often, they live in locations with limited or poor social, water and sanitation infrastructure which are vulnerable to floods and sea level rise. However, local communities, in particular women, are often excluded in developing ideas and initiatives to build economic and social resilience towards climate change and in decision-making processes, both at local and national levels. The involvement of community elements, including women, should then be underpinned.

Increasing involvement of local communities, especially the urban poor, in decisions relating to climate change has led to an initiative called Gender into Urban Climate Change Initiatives (GUCCI). The initiative aims to pursue options to integrate gender into Indonesia's climate change policies. GUCCI has then become part of the International Climate Initiative (IKI) of German Federal Ministry for the Environment, Natural Conservation, Buildings and Nuclear Safety, which was launched in 2015. This project is implemented through an international collaboration of women groups in Indonesia, India, South Africa and Germany. Aksi! for Gender, Social and Ecological Justice as well as Solidaritas Perempuan (Women's Solidarity for Human Rights) are GUCCI's partners in Indonesia.

This Status Quo Report is the first step of a series of GUCCI's activities in Indonesia. It contains information on urban policy situations in two cities: Jakarta and Makassar, both being GUCCI's pilot cities. It provides a basis for conducting gender assessment and developing strategies to build gender-sound climate change policies in cities.

The Urban Policy Status Quo Report is prepared in the format set by GenderCC, which is GUCCI's partner in Germany and plays a role as the GUCCI Coordinator. It is divided into several chapters: **Chapter One** outlines the methodology used, and the data collection and writing processes; **Chapter Two** provides a big picture of national-level policies; **Chapter Three** elaborates climate change policies in Jakarta and Makassar with considerations being given on the local climate change situations and the associated issues, GHGs emission produced, the city government's actions to address the issues, and how far gender considerations have been integrated into the policies; and **Chapter Four** provides feedback about the policy situations in both cities in the form of conclusions, questions and recommendations concerning what should be taken into consideration in the next phase of the project, i.e. performing gender analyses of the cities' climate change policies.

This April 2017 edition of the Status Quo Report is a revision from the November 2016 one after receiving input from other GUCCI partners.

Appreciation is expressed to the author team and the editor from Solidaritas Perempuan at the National Secretariat, Solidaritas Perempuan Anging Mamiri, Solidaritas Perempuan Jabotabek (Jakarta-Bogor-Tangerang-Bekasi), and Aksi! for gender, social and ecological justice. As well as Adiyawarman, who translated this document into English.

Jakarta, August 2017
 Risma Umar
 Project Team Leader
 Gender into Urban Climate Change Initiative in Indonesia (GUCCI)

Chapter 1. Methodology, Data Collection and Writing Process

The data used in the preparation of the status quo report on GUCCI's two pilot cities (Jakarta and Makassar) were collected based on the reporting structure format provided by GenderCC, GUCCI's partner and coordinator based in Germany (see Annex 1). The structure outlines the general descriptions of the pilot cities, including their socioeconomic factors; the current climate change situations in the cities, i.e. climate hazards affecting the citizens, GHGs emission, the cities' responses to climate change with regards to government's institutional levels, policies/action plans, strategies, commitments, and the way they are implemented; and lastly, the situations relating to gender issues.

To prepare the Status Quo Report containing the above descriptions, data were collected on climate change policies, both at national and city (Jakarta and Makassar) levels, including statistical data depicting the regions' conditions, community's socioeconomic factors, the development and threats of climate change issued by city-level disaster management agencies, GHG inventory by relevant city-level agencies, climate change priorities, commitments and strategies, the implementation of climate change policies, and gender considerations integrated into climate change policies.

Government's documents as well as those developed by other relevant parties such as research institutions and academicians were gathered from government's websites, such as data on the regions' conditions, demographics and socioeconomic factors. Visits were also made to government's relevant agencies such as BAPPEDA and BPLHD to see the needed documents. Challenges faced during the data collection phase included the unavailability of documents, both in the agencies' offices, especially in Jakarta, and on their websites, such as policies on gender mainstreaming in climate change.

The research team in both cities contributed their writings, which were then compiled and edited. The writing process also faced some challenges, including confusion in understanding the logics of climate change policies, both at national and regional/local levels, especially the urban policies. In addition, the data contained in some of the government's documents were hard to understand, requiring more time and efforts on the team's part to fathom the data.

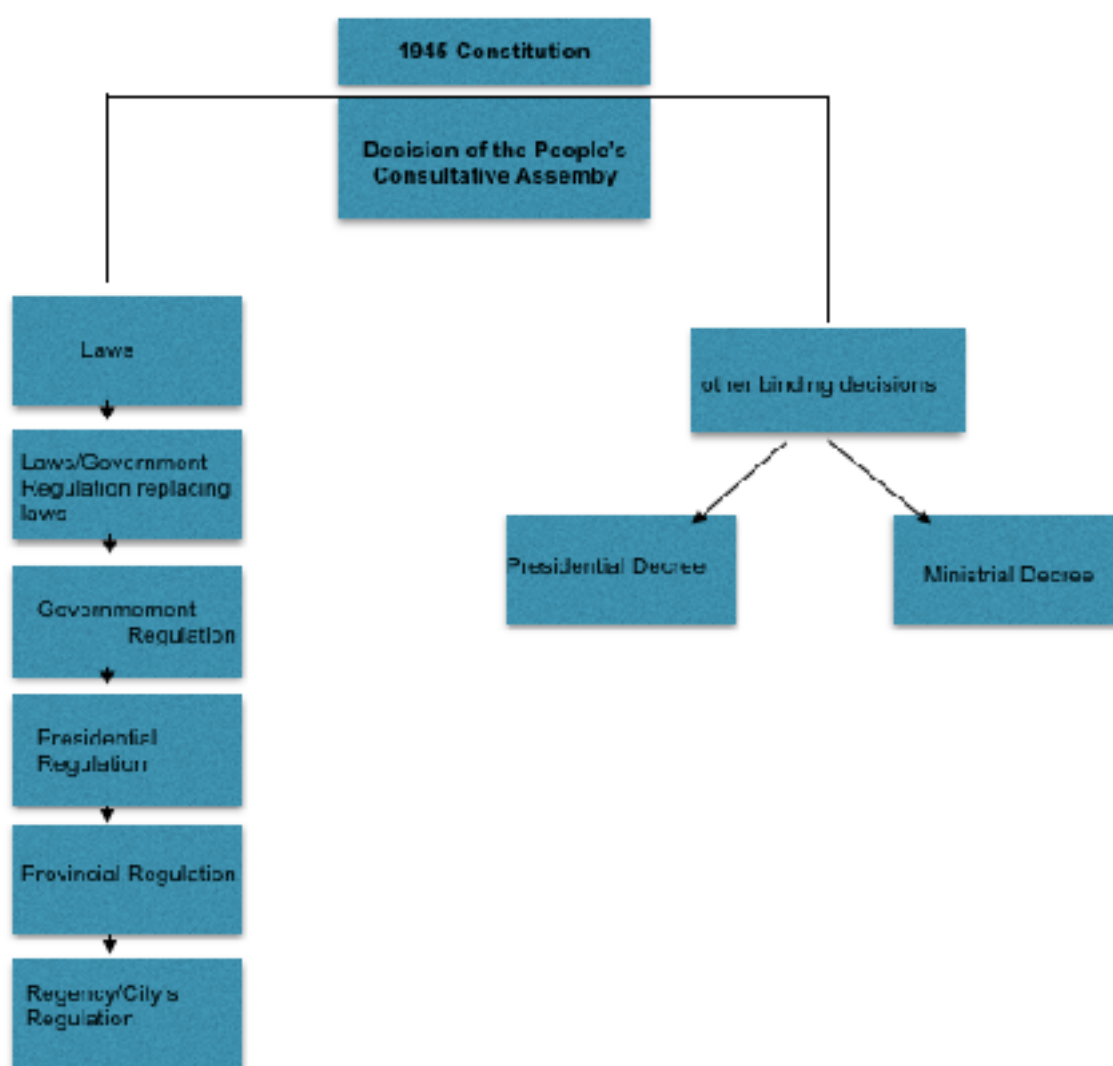
The challenges have made the compilation and editing process inevitably took longer to complete than the team had expected as quite a lot of information needed to be confirmed, fathomed and refined/improved.

Chapter 2. National Climate Change Policies

Analyses of Indonesia's national climate change policies were focused on 4 topics: (1) climate change governance; (2) climate change mitigation and adaptation action plans; (3) implementation of the policies; and (4) gender considerations in the policies.

Indonesian policies are arranged according to the Law no. 12/2011 on the establishment of Indonesian laws and regulations, among others the type and hierarchy of the law¹. The Law also explains that all laws and regulations or other binding regulations, must not contradict the Indonesian 1945 Constitution.

Figure 1.
Hierarchy of the Indonesian Law no. 12/2011



Source: GUCCII Research Team based based on the Law no. 12/2011 on the establishment of Indonesian laws and regulations, 2016

Look at ¹ paragraph 7 and 8 of the Law no. 12/2011 on the Establishment of Laws and Regulations

2.1. Climate Change Policy Governance

The development of Indonesia's climate change policy management concerning both climate change mitigation and adaptation started with the ratification of Law No. 6 Year 1994 regarding Endorsement of UNFCCC on Climate Change, Law No. 23 Year 1997 regarding Environmental Management; and Law No. 17 Year 2004 regarding the ratification of Kyoto Protocol. These three laws lay a foundation for Indonesia's climate change management.

Following UNFCCC's COP 13 in Bali, the government of Indonesia created the National Council for Climate Change (DNPI) through Presidential Decree No. 46 Year 2008. DNPI serves as an agency coordinating activities in climate change management and strengthening Indonesia's position in climate change negotiations at international level. DNPI's work areas cover (1) adaptation, (2) mitigation, (3) funding, and (4) technology transfer. Structurally, DNPI was under direct coordination of the president and coordinates with the Environmental Ministry and relevant ones.

Presidential Decree No. 54 Year 2009 creates the Presidential Working Unit for Development Supervision and Control, popularly called UKP4. Three ministries were assigned to run the unit: the National Development Planning Agency (*Badan Perencanaan Pembangunan Nasional/Bappenas*), and the Forestry Ministry under the coordination of the Coordinating Minister for Economics. They are responsible for developing REDD+ (Reduce Emission from Deforestation and Forest Degradation) institutions, funding mechanisms, and the MRV (Monitoring and Measurement, Reporting and Verification) system.

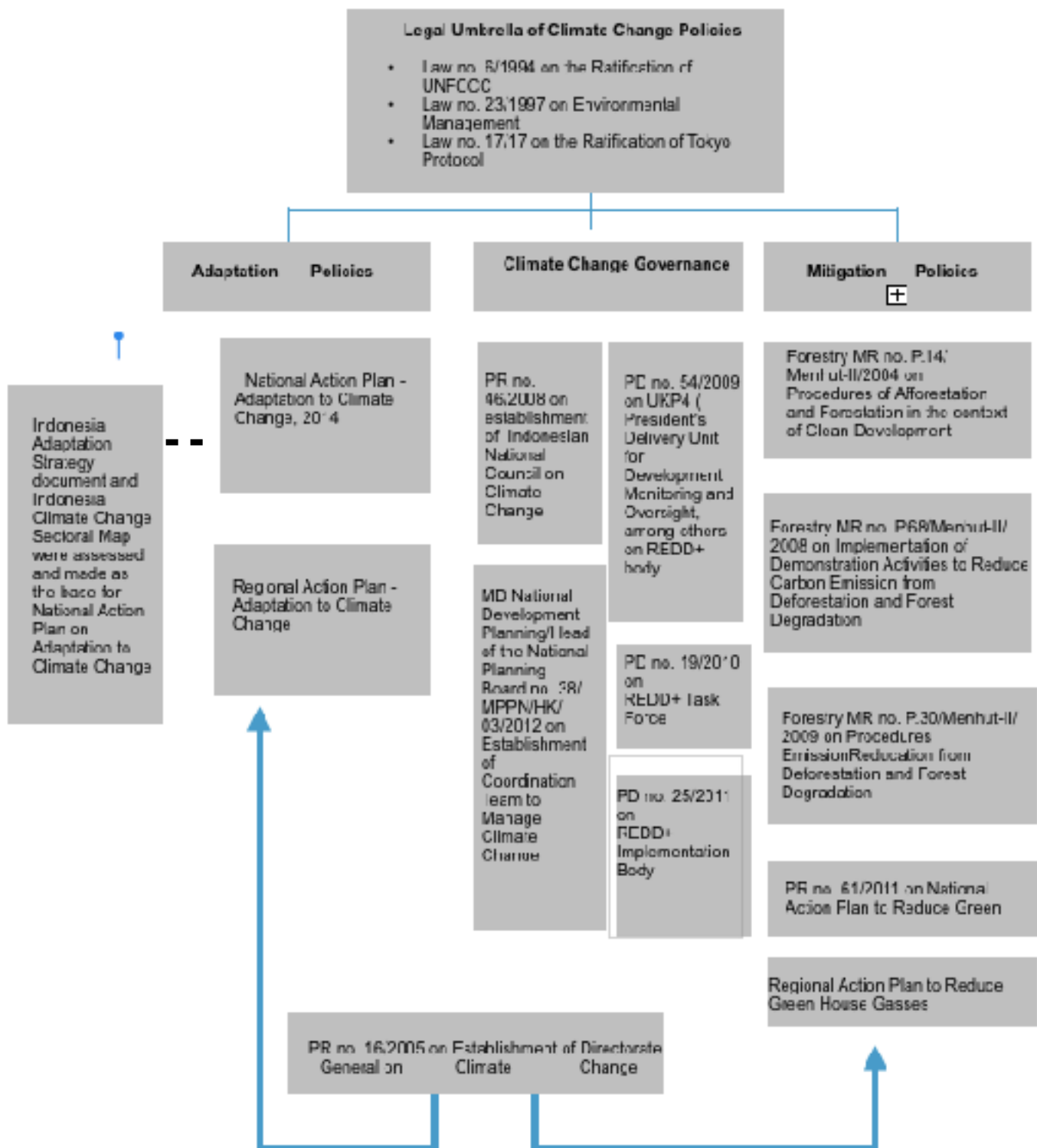
The REDD+ task force was then created based on Presidential Decree No. 19 Year 2010. Its tasks among others included ensuring the development of the National REDD+ Strategy and RAN-GRK, as well as preparing instruments and funding mechanisms for REDD+. Being an *ad hoc* body, the task force ended its work in June 2011. The tasks were to be continued by the REDD+ Implementing Body (BP REDD+), formed through Presidential Decree No. 25 Year 2011.

Under President Joko Widodo's government, climate change institutions have been restructured; DNPI and BP REDD+ are now merged into the Directorate General of Climate Change Control (*Ditjen PPI*), which is a new directorate within the merged Ministry of Environment and Forestry (MoEF). The latter is tasked with developing climate change policies and coordinating mitigation and adaptation activities. Ditjen PPI, formed based on Presidential Decree No. 16 Year 2015, also serves as the National Focal Point for UNFCCC's COP and is tasked with facilitating relevant programs as well as the processes implemented by various government agencies and stakeholders. It is composed of (1) the Directorate of Climate Change Adaptation, (2) the Directorate of Climate Change Mitigation, (3) the Directorate of GHGs Investment and MRV, (4) the Directorate of Mobilization of Sectoral and Regional Resources, and (5) the Directorate of Forest and Land Fires Control.²

Bappenas manages also with efforts to combat climate change. Its Sub-Directorate of Climate Change Quality of the National Development Planning Agency is tasked with coordinating, formulating and implementing policies and monitoring, evaluation and control of national development plans in environmental quality and climate change. Bappenas then develops national action plans (RANs) for GHGs (RAN-GRK) and for climate change adaptation (RAN-API). Both Action Plans are then translated to regional-level action plans (RAD-GRK and RAD-API). Bappenas and MoFE, in cooperation with the Ministry of Foreign Affairs, are involved in climate change negotiations at international level.

² Source: The Directorate General of Climate Change Control at: <http://ditjenppi.menlhk.go.id/direktorat>

Figure 2.
Structure of Climate Change Policy in Indonesia³



Source: developed by GUCCII Research team based on various resources

³ Abbreviation: MD = Ministerial Decree; MR = Ministerial Regulation PD = Presidential Decree; PR = Presidential Regulation. UKP-4, Indonesian Council on Climate Change and REDD+ Task Force and Implementation Body were dissolved in February 2016 during government restructurization under new selected president, Joko Widodo.

Figure 2. shows a chart of national climate change policy in Indonesia. The climate change policy in Indonesia covers 3 main topics, namely (1) climate change governance; (2) climate change action plans for both mitigation and adaptation; (3) implementation of both action plans. Meanwhile, gender consideration is a cross-cutting topic that is mainstreamed to those action plans.

2.2. Climate Change Action Plan

Former President Soesilo Bambang Yudhoyono announced in the 2009 G-20 Summit in Pittsburgh Indonesia's commitment to reducing emission by 26% based on a BAU scenario, and by 41% with international support. In 2015 President Joko Widodo presented INDC (Intended Nationally Determined Contribution) during UNFCCC's COP 21 in Paris, reaffirmed the country's commitment to GHG emission reduction: a 29% reduction based on a BAU scenario by 2030 by itself, and a 41% reduction with international support. With regard to mitigation, Indonesia gives priority to 3 areas: (1) Forest and Land Use, (2) Energy Security, and (3) Waste. As for adaptation, 9 areas are given priority: (1) Agriculture, (2) Water, (3) Energy Security, (4) Forestry, (5) Marine and Fisheries, (6) Health, (7) Public Services, (8) Infrastructure, and (9) Urban System.

To meet the ends, the Indonesia's government relies on a number of strategies which include (1) using landscape approach⁴, (2) bringing out the existing best practices, (3) mainstreaming climate change in development planning, and (4) promoting resilience to climate change in the food, water and energy sectors.

The INDC has yet to be translated into NDC (Nationally Determined Contribution), and in national policies and work plans.

2.2.1. Climate Change Mitigation Policies

The umbrella policies for mitigation policy implementation in Indonesia are as follows:

- Forestry Minister's Decree No.P.14/Menhut-II/2004 regarding Afforestation and Reforestation Procedures in Clean Development Framework.
- Forestry Minister's Decree No.P.68/Menhut-II/2008 regarding Implementation of Demonstration Activities on Reducing Emission from Deforestation and Forest Degradation. These activities are commonly called REDD.
- Forestry Minister's Decree No. P.30/Menhut-II/2009 regarding Procedures for Reducing Emission from Deforestation and Forest Degradation.
- Forestry Minister's Decree No.P.36/Menhut-II/2009 regarding Procedures for Licensing Of Commercial Utilisation Of Carbon Sequestration and/or Storage In Production and Protected Forests.

RAN-GRK was established through Presidential Decree (Perpres) No. 61 Year 2011, which was then translated into 10 national policies. The decree contains Indonesia's commitment to reducing GHGs emission by 26% based on a BAU scenario by 2020. RAN-GRK gives priority to 5 sectors: (1) forests and peatlands, (2) energy and transportation, (3) agriculture, (4) industry and (5) waste. In addition to these plans, there is Presidential Decree No.71 Year 2011 that regulates the procedures for inventorying national GHGs emission. The decree aims to provide information on the level and status of, and trends in emission changes and GHGs sequestration including carbon storage at national, provincial and

⁴ Landscape approach provides the concept and tools to allocate and manage lands in accordance with the social, economic and environmental objectives in areas where there is contestation between land utilization for agriculture, mining and other productive activities on one side and environmental and biodiversity purposes on the other side. Further information can be found in CIFOR, *Ten principles for a landscape approach to reconciling agriculture, conservation, and other competing land uses* at: <http://www.cifor.org/library/4136/ten-principles-for-a-landscape-approach-to-reconciling-agriculture-conservation-and-other-competing-land-uses/>

district/city levels on a regular basis. It also provides information on the level of emission reduction achieved from national climate change mitigation activities.

2.2.2. Climate Change Adaptation Policies

The government of Indonesia has developed a number of initiatives to adapt to climate change, such as Indonesia Adaptation Strategy, RAN API, Indonesia Climate Change Sectoral Road Map (Bappenas, the National Action Plan for Climate Change and Sectoral Adaptation Plan by ministries/agencies, as well as the Strategies to Mainstreaming Adaptation into the National Development Planning document).⁵ The development of RAN-API was the responsibility of Working Group VI on Adaptation in accordance with the Decree of the Minister of National Development Planning (*PPN*)/Head of National Development Planning Agency No.Kep. 38/M.PPN/HK/03/2012 regarding Creation of the Climate Change Management Coordination Team.

The RAN-API document, published in 2014, is part of the national development planning framework and serves as a reference for regional governments to develop their respective regional action plans –Regional Action Plan for Climate Change Adaptation (RAD-API)—under direct coordination of their respective governors. RAN-API is not a separate document having its own legal formal power, but is the integral part of the national development plan and ministries'/agencies' planning. The RAN-API strategies are directed so that: (1) the impacts of climate change can be mitigated to the highest extent possible, and (2) they can strengthen the resilience and/or reduce the vulnerability level of a natural system, order of life, and climate change-related program or activities.

RAN-API has 4 strategies/priorities: (a) Economic Security, including food security and energy independence, (b) Life System Security, including health, housing and infrastructure, (c) Ecosystem Resilience, including ecosystems and biodiversity, and (d) Special Regions Security, including urban and coastal areas and small islands. To implement those strategies, the government has prepared a supporting system to ensure sustainability.

2.3. Climate Change Policy Implementation

A number of actions have been carried out by the national government, both to mitigate and adapt to climate change. Among those having been done and currently underway are the following:

- (a) Presidential Decree No.61 Year 2011 regarding the National Action Plan for Reducing Greenhouse Gas Emission (RAN-GRK) and Forestry Minister's Decree No. P. 68/Menhut-II/2008 regarding Implementation of REDD+ Demonstration Activity (DA). REDD+ DA is carried out in 11 regions of Indonesia⁶, aiming at helping reduce GHG emission in the forestry and peatland sectors.
- (b) Up to November 2013, there were 40 mitigation projects in Indonesia, mostly being carried out in Kalimantan:⁷ 37 REDD+ projects, 1 reforestation project, and 2 afforestation/reforestation projects.
- (c) The RAN-GRK policy is also implemented through the PAKLIM program (Policy Advice for Environment and Climate Change), which is a collaborative program with German organization GIZ. It aims at developing models and structures to implement and disseminate mitigation and adaptation approaches, such as: (1) economic

⁵ Kementerian Perencanaan Pembangunan Nasional/Badan Perencanaan Pembangunan Nasional (BAPPENAS), Rencana Aksi Nasional – Adaptasi Perubahan Iklim (RAN-API), 2014, (<http://perpustakaan.bappenas.go.id/lontar/opac/themes/bappenas4/templateDetail.jsp?id=153661&lokasi=lokal>)

⁶ The official website of the Ministry of Environment and Forestry (<http://redd-indonesia.org/index.php/tentang-kami/map2>)

⁷ Forest Carbon Asia, Forest Carbon Project in Asia <http://www.forestcarbonasia.org/activities/forest-carbon-projects/>

instruments and fiscal incentives/disincentives to attract the private sectors to get involved, (2) innovative funding for mitigation and adaptation, (3) mainstreaming voluntary partnership agreements and development partnership in energy-intensive industries, (4) support from climate-friendly schools and youth's initiatives, and (5) development of reference scenarios and tools for measurement, reporting and verification. PAKLIM also has urban climate change strategy programs which are currently underway in 10 cities across the country,⁸

In addition to the RAN-GRK policy, there is Environment Minister's Decree No. 19 Year 2012 regarding Climate Villages Program (ProKlim). The program is to be implemented from national level down to regional level. ProKlim is a program that encourages local communities to be actively participated in climate change mitigation and adaptation, with the overall target to contribute to the national GHGs emission reduction target and increase community's resilience to climate change impacts. ProKlim includes 3 main components: adaptation, mitigation, and Community and Sustainability. Launched by the Environment Minister in 2011 during the 1st National Summit on Climate Change in Bali, ProKlim is a mitigation and adaptation program that can be tailored to regional situations and conditions. During 2012-2016, the government received 278 inputs into the program from all over the country.⁹

2.4. Gender considerations in climate change policies

The government of Indonesia is mainstreaming gender in a number of climate change policies, starting with Presidential Decree No. 9 Year 2000 regarding Gender Mainstreaming in Development. The decree aims at (1) increasing the position, roles and quality of women and establishing gender equality and justice in family, social, nation and state life; (2) integrating gender mainstreaming in all the development processes as the integral part of the functional activities of all government agencies and institutions at national and regional level.

The Ministry of National Development Planning/BAPPENAS in 2012 issued a policy paper on 'Gender Mainstreaming in Climate Change Responses'¹⁰. The paper aimed at increasing the understanding of gender mainstreaming in climate change policies, identifying priority gender issues to be integrated into climate change policies, and formulating gender-responsive climate change recommendations, particularly for RAN GRK and RAN API.¹¹

RAN API refers to the policy paper on the grounds that it can gain much benefit from gender mainstreaming in: (1) making the best use of men's and women's talents, capacity and contribution in order to make the policy workable, efficient and effective; (2) avoiding detrimental impacts of climate change adaptation and other actions that may increase gender inequality and poverty; (3) empowering and improving the life quality and livelihoods of women, their households and all the citizens; (4) ensuring harmonization with social and gender policies and fulfillment of human rights so as to contribute to equality and to help achieve MDGs; and (5) initiating gender-sensitive actions to open up 'insights' into other dimensions and climate change.

The RAN API 2014 focuses on 4 priority areas to build economic resilience, and livelihood resilience, both physical and socioeconomic, and to maintain ecosystem resilience and that of special areas such as small islands to support climate change-proof communities' lives. The Action Plan integrates gender aspects, considering that climate change has specific and different impacts on women and men, and that efforts should be taken to reduce vulnerability,

⁸ See: <http://www.paklim.org/index.php/id/about/about-paklim.html>

⁹ Further information on ProKlim can be found at: <http://proklm.menlhk.go.id/> and <http://www.menlh.go.id/proklm-aksi-lokal-adaptasi-dan-mitigasi-perubahan-iklim/>

¹⁰ http://www.bappenas.go.id/files/5913/5182/6592/siaran-pers---gmcca-ikkg-27nov_20130322141111_0.pdf

¹¹ Policy Paper: Gender Mainstreaming in Climate Change Policies (see: www.bappenas.go.id/index.php/download_file/view/14503/4246/)

particularly among climate change-prone groups such as women, children, low-income communities, and the elderly.

The Decree of the Head of National Disaster Management No. 13 Year 2014 regulates gender mainstreaming in disaster management. Gender-responsive disaster management is deemed necessary to ensure just and humane fulfillment of men's and women's rights. Gender-responsive disaster management is implemented in all phases: budgeting, funding, implementation, monitoring, evaluation and reporting. During policy-making, gender-responsive disaster management programs and activities are set out in the Strategic Plan and the National and Regional Government Work Plans (RKP and RKPD), and refer to the National and Regional Mid-Term Development Plans (RPJMN and RPJMD), which included gender analyses in their development. The gender analyses used (1) disaggregated data and (2) Gender Analysis Pathway method or other relevant methods.¹²

The Decree of the Minister of Environment and Forestry No. 19/ 2012 regarding Proklam, which specifically mentions gender consideration by group (father, mother, juvenile and children), will enrich and strengthen the implementation of Proklam's climate change mitigation and adaptation activities at local level.

¹² <http://bnpb.go.id/berita/2904/perka-bnpb-no-132014-tentang-pengarusutamaan-gender-di-bidang-pb>

Chapter 3.

Climate Change Policies in the Two Pilot Cities

Makassar and Jakarta are designated as GUCCI's pilot cities due to their vulnerability to climate change as coastal cities; they have had to be always prepared to face sea level rise, winds and strong waves as well as floods. As important economic and administration centers in their respective regions, they represent agglomeration of population coming from their surrounding areas, which do not share the same pace of development. As a result, they are characterized by the large number of poor people living in slum areas.

Overall, the chapter depicts the policy situations in these two cities with regard to general information such as location, size, and population; socioeconomic information; climate change situations with regard to associated disaster and threats, as well as the emission level; and information on how they are responding to climate change with regard to governance and service delivery as well as climate change policies and activities, and gender considerations. The data were analyzed to identify any gap in the information and knowledge as well as potential and existing threats, from which preliminary conclusions were drawn. The next step, an assessment of how gender is incorporated into urban climate change policies, would confirm how far the preliminary conclusions reflected the fact.

3.1. Climate Change Policies in Jakarta City

3.1.1. General Overview

The Special Capital Region/Province (DKI) of Jakarta is the capital of the Republic of Indonesia. Situated in the northwest part of West Java, it consists of 5 municipalities (Central Jakarta, North Jakarta, West Jakarta, South Jakarta, and East Jakarta) and 1 administrative district (*Kepulauan Seribu*/Thousand Islands). It covers a land area of 662.33 Km² and 6,977.5 Km² of sea area, with at least 110 small islands that compose Kepulauan Seribu.¹³

The population in 2015 was estimated to stand at 10,075,320 (the Census 2010's projection) with the annual population growth rate reaching 1.02% between 2010 and 2014, and 1.09% between 2014 and 2015.¹⁴ By sex, the population was made up of 5,005,380 women and 5,006,940 men. The household heads totaled 694,529 and 2,584,136 in 2014 for female and male respectively.¹⁵

In 2013, the urban poor stood at 371,700 people¹⁶, which increased slightly to 398,920 in 2015¹⁷, with the majority living in North Jakarta, standing at 90,900 people. The lowest poverty rate was found in Kepulauan Seribu, with 2,500 poor people. This means that around 3.39% of the population was still living below the poverty line, and that there is one poor person in every 25 people.

As of March 2013, the Poverty Gap Index of Jakarta¹⁸ stood at 0.629%. It increased significantly by September 2014 to 0.6%, compared with 0.387% in March 2014. In March 2015, the index leveled off at 0.517%. The data show an upward trend in the poverty gap index over the period. The index also show the gaps in consumption level of Jakarta population relative to their capacity to meet basic needs.

Meanwhile, the Poverty Severity Index¹⁹ as of March 2013 stood at 0.169%, and increased to 0.131% in September 2014 and to 0.104% in March 2015. The figures show a downward trend in the poverty severity level.

School Participation Rate (APS) of Jakarta during the 2014-2015 school year is shown in the Table 1. below:²⁰

¹³ Accessed at <http://jakarta.bps.go.id/linkTabelStatistik/view/id/58> pada 22 August 2016 at 7:55 am. Can also be seen at Governor Decree No. 171 Year 2007.

¹⁴ Ibid, p71

¹⁵ Based on the 2014 data from the Civil Registration

¹⁶ Ibid, p112. BPS uses the concept of basic needs fulfilment (basic needs approach) to measure poverty. Poverty is seen as the inability from economic perspective to meet basic needs (food and non-food) by expenditures.

¹⁷ Tingkat Kemiskinan DKI Jakarta, accessed through <http://www.jakarta.go.id/v2/news/2015/09/tingkat-kemiskinan-di-dki-jakarta-maret-2015#.V70mpvQXf98>.

¹⁸ Poverty Gap Index is a measure of the shortfall in the welfare of the poor from the poverty line. The higher the number is, the farther the average welfare from the poverty line is.

¹⁹ Poverty Severity Index represents distribution of consumption among the poor. The higher the number is, the greater the gap in the poor's consumption is.

²⁰ BSP Provinsi DKI Jakarta, Statistik Daerah Provinsi DKI Jakarta 2015, p3 at: <http://jakarta.bps.go.id/backend/pdf/publikasi/Statistik-Daerah-Provinsi-DKI-Jakarta-2015.pdf>

Table 1
Number of schools, students and teachers in Jakarta City, 2014/2015

Education Level	Schools	Students	Teachers
Kindergaten	1,999	86,805	10,541
Primary School	2,950,000	821,360	40,926
Secondary School	1,040,000	363,337	22,665
High School	474	136,579	13,147
Vocational Schools	597	150,503	15,410

Source: Jakarta dalam Angka, Central Statistics Bureau of Jakarta, 2015

The dropout rate for primary school in 2014 stood at 9,489 students; 2,042 for secondary school; and 1,332 students for high/vocational school.²¹ On the other side, the illiteracy rate showed a downward trend from year to year according to the Central Statistics Bureau.

The 2015 workforce data show that 5,548,000 citizens had a job, of which 79.8% were engaged in the trade/transportation/finance/service sector, 18.79% in the industry/electricity/construction sector, and 1.41% in the mining/agricultural sector.²²

81% of the total water need in Jakarta still depends on supply from Jatiluhur Dam, 14% from Tangerang Water Company, and 5% from the Krukut River. Currently, only about 57% of the population have access to clean water²³ provided by regional water companies and collaborative private-state water companies such as Palyja, and AETRA. The remaining 43% have to rely on ground water and/or purchase water from various sources. It is the latter that are vulnerable to water crisis during prolonged draughts.²⁴

3.1.2. Jakarta and Climate Change

3.1.2.1. Climate hazards affecting Jakarta City

The 2014 El Nino²⁵ increased rainfall intensity to 253mm, with a 10.6°C temperature range between day (34.6°C) and night (24.0°C).²⁶ The rainfall fell to 5mm in late 2015, with only a one-time rain and a 15.4°C temperature range between day (36.4°C) and night (21.0°C). El Nino causes temperature anomaly, where the low air temperature hampers water vaporization from condensing into cloud, resulting in less rain. If the opposite occurs, unstable rainfall happens. The impacts varies with regions. The harvesting season in the food supply areas has retreated due to the late arrival of the rainy season, affecting the availability of food in the Jakarta area. At El Nino in 1998 the government even had to import

²¹ Data from DKI Jakarta Education Office as of March 2015

²² Badan Pusat Statistik, 2015, Statistik Daerah DKI Jakarta, Jakarta: BPS, p8

²³ ibid

²⁴ <http://www.beritasatu.com/megapolitan/310702-suplai-air-baku-minum-ke-jakarta-cukup.html>

²⁵ El Nino is a global climate change phenomenon caused by warming temperatures in the surface of the eastern Pacific waters (Sumber : <http://ilmugeografi.com/fenomena-alam/proses-terjadinya-el-nino-dan-la-nina> , diakses pada tanggal 28 Maret 2017, pukul 20.00 WIB). Decreased rainfall caused by El Nino causes less moisture levels in the soil (Sumber: <http://un.or.id/el-nino/images/download/s-scenarios-el-nino-la-nina-impact-on-indonesia-bahasa-indonesia-version.pdf>).

²⁶ Badan Meteorologi dan Geofisika, laporan perkembangan per 2015.

6 million tons of rice to ensure food availability. In addition, El Nino also affects the increasing threat of hydro-meteorological disasters including drought disaster in Jakarta because 85% of Jakarta's water still has to be supplied from Jati Luhur Reservoir which is also threatened by drought²⁷.

Another climate threat is the rising of sea level, which accelerates erosion of Jakarta's northern coasts, causing seawater to intrude ground water and destroying coastal swamps and submerging small islands.²⁸ The threat is real as Jakarta's coastal areas are on the same level or below the sea water. Geographically, Jakarta is situated along active seismic coastline, making it vulnerable to tidal floods.²⁹ In addition, Jakarta has been experiencing land subsidence with the rate fetching 1.5m due to excessive water extraction by both households and the industry.³⁰ All the above, compounded by increasing seawater discharge, make Jakarta's northern areas (which are the closest to sea) vulnerable to monthly tidal floods.³¹

To address tidal floods, in 2009 the government of Jakarta has built 3m-high embankments along the coastline, i.e. Muara Angke, Cilincing, Marunda, Muara Karang, Pluit, Luar Batang, and Martadinata (Figure 1), with the total length of 3000 m.

Figure 3.

Flood Embankments in Jakarta



Source: Official website of Jakarta Capital City Government (jakarta.go.id), 2009

Besides the climate threats above, Jakarta has to face regular floods resulting from the overflowing of 13 rivers that run through the city. In 2016, floods ranging in height from 5 to 300 cm hit Jakarta, impacting at least 51,234 people, with 2,192 having to be evacuated. The number of the affected people increased compared with that in the 2015 flood, when 13,195 people were affected and 534 had to be evacuated.³² The worst flood, however, happened in 2007 when the river flood was compounded by tidal floods, paralyzing 70% of the city. The death toll fetched 57, and 422,300 people had to be evacuated, with at least 1,500 houses

²⁷ More information about this at: <http://dsdan.go.id/index.php/449-kunjungan-lapangan-anggota-dewan-sda-nasional-dampak-el-nino-waduk-jatiluhur-kritis>.

²⁸ BPBD, Mengapa Jakarta Banjir? Pengendalian Banjir Pemerintah Provinsi DKI Jakarta.2010. Jakarta: Team Mirah Sakheti, p24

²⁹ The final report on RAD API DKI Jakarta, BPLHD DKI Jakarta

³⁰ Ibid

³¹ See: <http://bpbd.jakarta.go.id/news/detail/1090>

³² Recapitulation of floods in DKI Jakarta in 2015 and 2016, BPBD DKI Jakarta

being washed away. The total economic loss resulting from the flood was estimated to stand at around USD 697 millions.³³

3.1.2.2. Greenhouse Gas Emission Produced by Jakarta City

Based on Presidential Decree No. 61 Year 2011 regarding RAN GRK and Presidential Decree No. 71 Year 2011 regarding GHG Inventory, the government of Jakarta issued Governor's Decree No. 131 Year 2012 regarding Regional Action Plan for Reducing Greenhouse Gas Emission, as the basis for the GHGs inventory.

Implementing Agencies

Based on Presidential Decree No. 71 Year 2011, the GHGs emission inventory is to be implemented by relevant ministers and/or heads of non-ministry agencies, governors, regents and mayors, who are responsible for coordination and data processing in accordance with their respective main tasks and functions. Specifically, governors also coordinate the implementation at district/municipality level under their jurisdiction. In Jakarta, the inventory is implemented by all the relevant stakeholders, i.e. Regional Administrative Working Unit (SKPD), Sub-office (Sub-Dinas) under SKPD, Marketing Operation Region 3 - Pertamina Wilayah Jakarta, PGN (National Gas Company) Jakarta, PLN (National Electricity Company), and others.³⁴

Jakarta's GHG Emission Inventory

Jakarta's GHGs emission inventory covers the energy, waste and AFOLU (Agriculture, Forestry and Land Use) sectors.

Jakarta's direct GHGs emission in the waste sector in 2014³⁵ totaled 27,843 Gg CO₂-e, with the distribution of CO₂, CH₄, and N₂O (in CO₂-e) standing at 91.5%, 7.5%, dan 1.0% respectively. The main GHGs contributor included the energy sector (92.7%) and the waste sector (7.3%), as given in [Table 2](#).³⁶ The table also shows that the energy sector emitted 25,465 Gg of CO₂. Fossil-fuel combustion for transportation was the largest emission contributor, and also consumed considerable amount of fossil fuel. Energy production and households were also among the largest CO₂ emission contributors. The waste sector was the largest contributor of CH₄ emission with 90.93 Gg CH₄. Solid waste and domestic liquid waste also contributed considerable amount of CH₄ emission. Another gas emitted by the sector was N₂O, standing at 0.42 Gg.

GHGs Emission Trend

The sectoral emissions (energy, waste, AFOLU) up to the year 2014 showed an upward trend. Summary of the sectoral GHG emissions during 2010-2014 is given in [Table 3](#). Fluctuations in the energy and waste sectors were not significant as the sequestration levels by Green Open Spaces were also insignificant. This indicates that the government's efforts to reduce GHGs emissions tended to focus more on reducing energy consumption and managing waste rather than promoting afforestation (e.g. green open spaces).

³³United Nation Development Project, "Sisi Lain Perubahan Iklim: Mengapa Indonesia harus beradaptasi untuk melindungi rakyat Miskin", 2007, Indonesia : UNDP, hal 9.

³⁴ Inventarisasi Gas Rumah Kaca, 2015, BPLHD DKI Jakarta, p12

³⁵ Direct GHGs emission is emission from activities or sources within specified boundaries, for example, the CO₂ emission from motor vehicles. Indirect GHG emission refers to the outputs of activities within the specified boundaries, for example the household electrical consumption.

³⁶ Ibid, p14-15

Table 2.
Jakarta's Direct GHGs Emission Inventory 2014

No	Categories of Souce	C O ₂ Sequestrati on	C O ₂ Emission	C H ₄ Emission	N ₂ O Emission
		Ggram			
1. GHG Emission relating to Energy			25,465	8.84	0.49
A	Fossil-fuel Combustion		25,445	3.82	0.49
1	Energy Production		6,041	0.11	0.01
2	Manufacturing Industry		3,208	0.09	0.02
3	Transportation		9,815	3.10	0.45
4	Residential & Commercial		6,215	0.50	0.01
5	Others		166	0.02	0.00
B	Fugitive Emission		21	5.03	0.00
1	Crude Oil		21	5.03	0.00
2	Natural Gas		0.02	0.00	3.7E-08
2. GHG Emission relating to Waste				90.93	0.42
1	Solid waste in landfill			50.76	NE
2	Biologically-processed waste			0.38	0.02
3	Domestic liquid waste			39.78	0.40
3. GHG Sequestration (Green Open Space)					
1	Parks	-129.9	NE	NE	NE
2	Forestry (Mangrove forests?)	-125.5	NE	NE	NE
3	Agriculture	-169.0	NE	NE	NE

Source: Jakarta GHGs Emission Inventory Report 2014, BPLHD

Table 3.GHG Emissions and Sequestration, 2010 - 2014 (Gg CO₂e)

Year	Energy	Waste	Green Open Space	Total
2010	23,799	2,034	-422	25,411
2011	24,594	1,948	-422	26,120
2012	24,408	1,829	-423	25,814
2013	26,055	1,916	-423	27,548
2014	25,802	1,978	-425	27,355

Source: BPLHD, Jakarta GHGs Emission Inventory Report 2014

3.1.3. Jakarta City Responses to Climate Change

3.1.3.1. Governance and Services

The City of Jakarta is the capital of the Republic of Indonesia, as the center of government and as an autonomous region that has special character from other regions in Indonesia. Jakarta is led by a Governor like any other province, but it has 5 mayors directly responsible to the Governor. In addition to the Mayor / Vice Mayor, there are also 5 bodies directly under the Governor, namely (1) Regional Planning Board, (2) Regional Agency, (3) Regional Secretary, (4) Technical Agency, and (5) Regional Supervisory Board. The structure of Jakarta government can be seen in the Figure 4. below

Two government agencies in Jakarta are responsible for controlling and managing climate change:

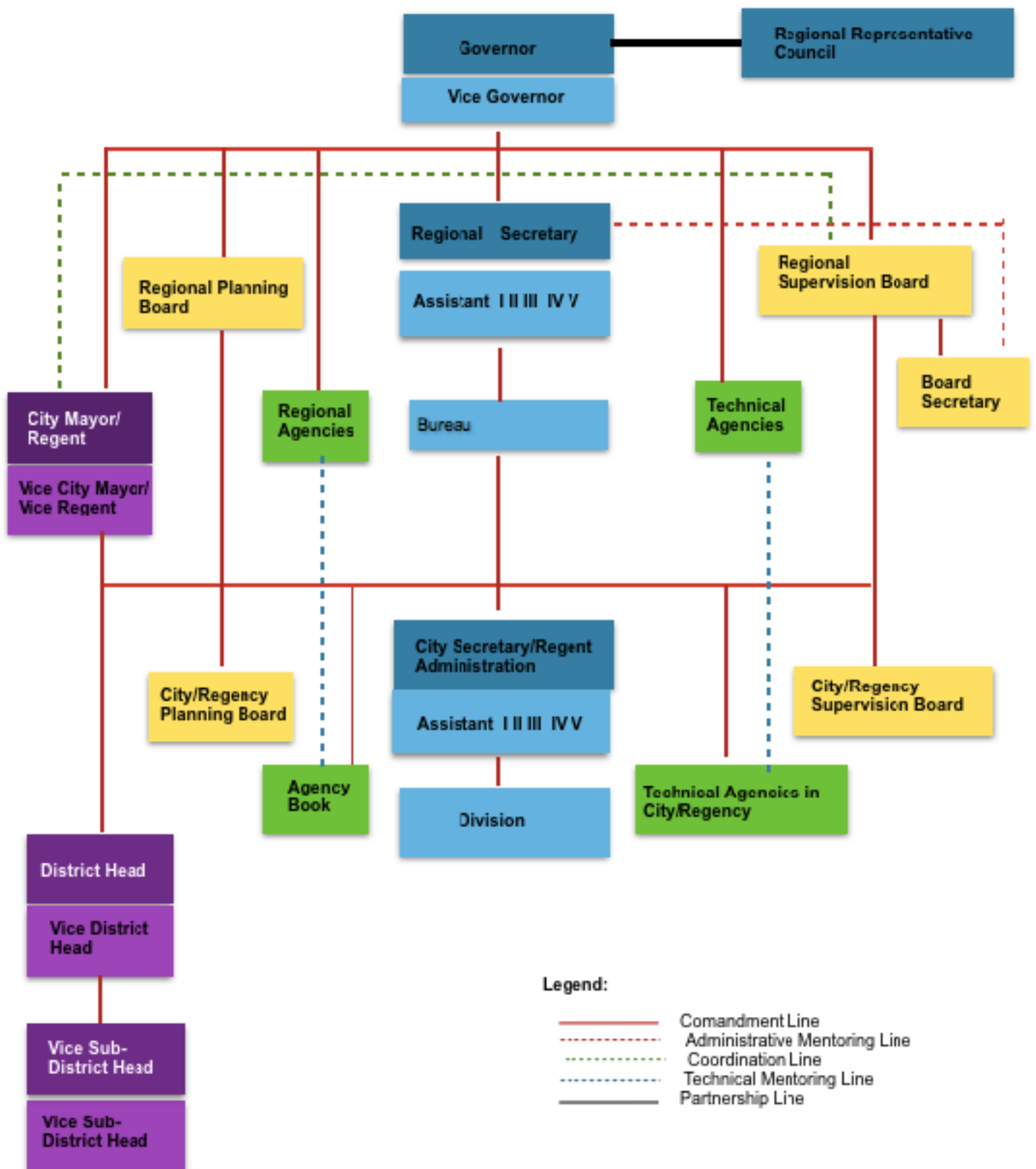
1. The Provincial Environmental Management Agency (BPLHD) of Jakarta – it was established through Provincial Regulation no. 10/2008 to support the provincial government in Environmental Protection and Management. It is presided by a head who is subordinate and reports to the governor via the Regional Secretary. In implementing its tasks and functions, it is coordinated by the Development and Environment Assistant. It is composed of 4 divisions, one of which is the Environmental Preservation Division overseeing the Climate Change Sub-Division.³⁷
2. The Provincial Disaster Management Agency (BPBD) of Jakarta - it was established through Provincial Regulation No. 9 Year 2011 regarding Provincial Disaster Management Agency.³⁸ It has the task of formulating and establishing disaster management policies, refugee management policies and coordinating the implementation of disaster management in an integrated and comprehensive manner. Headed by an executing chair, it consists of 3 divisions: 1) Prevention and Preparedness; 2) Emergency and Logistics; 3) Rehabilitation and Reconstruction.
3. BAPPEDA was established through Governor Decree No. 220 regarding Provincial Development Planning Organization and Procedures. Structurally, it has cross-sectoral tasks and responsibilities. It consists of 3 divisions: (1) People's Welfare, (2) City and Environmental Facilities and Infrastructure; the division oversees the sub-divisions of spatial planning; landscaping and cemetery; Waterworks, Sanitary and Environment, City

³⁷ BPLHD Propinsi DKI Jakarta, Rencana Strategis 2013-2017 BPLHD Propinsi DKI Jakarta

³⁸ Peraturan Daerah (Perda) Provinsi DKI Jakarta No. 9 Tahun 2011 tentang Badan Penanggulangan Bencana Daerah (See also: <http://bpbd.jakarta.go.id/elibrary/category/2#>)

Implementation; and (3) Economics, which oversees the sub-division of trade, cooperative, energy, marine affairs and food security.

Figure 4.
The Structure of Jakarta City Governance



Source : Jakartapedia/ Jakarta Library and Archives Agency based on Regional Decree no. 12 year 2014 regarding Organization of regional work unit

3.1.3.2. Climate Change Policies and Action Plans

City-level commitments, strategies and priorities

Jakarta government's commitment, strategies and priorities in climate change control and management are manifested in the birth of a number of city-level policies on mitigation and adaptation.

- In the plan for mitigation, the Government of Jakarta has translated the RAN into regional policies through Governor's Decree No. 131 Year 2012 regarding RAD-GRK. Under the decree, the government of Jakarta is committed to 30% GHGs emission reduction by 2030. To meet the end, the government of Jakarta uses low carbon development strategies that focus on 2 sectors: (1) Energy, which includes households, transportation, electricity generation, street lighting, and commercial and industrial sources; and (2) Waste, which includes solid and liquid waste. In addition, the government of Jakarta is aiming to create green open space the covers 30% of the city area. Green open spaces includes roof gardens, indoor gardens and vertical gardens.
- Climate change management is set out in Regional Regulation of the Special Capital Region of Jakarta No.2 Year 2013 regarding Jakarta's 2013-2017 Mid-Term Development Plan and in Governor's Decree No. 1081 Year 2013 regarding Endorsement of the Regional Administrative Working Unit's 2013-2017 Strategic Plans in the Regional Environment. Climate change management is Jakarta's second mission, which seeks to make Jakarta free of long-standing issues such as floods, traffic jams, slum areas, waste, and other problems. The mission is intended among others to promote environmentally-sound and resilient city development to respond to climate change hazards and impacts.
- The strategies for disaster risks mitigation, and climate change mitigation and adaptation are: (a) implementing RAD-GRK, (b) increasing preparedness and stakeholder involvement in facing potential hazards; (c) providing facilities and infrastructure for hazard mitigation and disaster threats; (d) increasing the capacity of the local government in handling and mitigating disaster risks; and (e) improving community's capacity in disaster risk reduction.
- One of Jakarta's priority programs is the effort to control floods, tidal floods and other impacts of climate change through the development of Giant Sea Wall in the context of Jakarta Coastal Development Strategy (JCDS)/ *National Capital Integrated Coastal Development (NCICD)*³⁹.

The government of Jakarta has also translated the national adaptation action plan (RAN-API) into regional policy (RAD-API), which is integrated into the Regional Mid-Term Development Plan (RPJMD DKI Jakarta). The RAD-API serves as the reference for Jakarta's Regional Administrative Working Unit (SKPD) in implementing climate change mitigation programs in Jakarta. RAD-API has 5 priority areas: (1) Energy Independence, (2) Health, (3) Infrastructure, (4) Settlement, and (5) Environmental Service Delivery.

Implementation

Since the enactment of Governor's Decree No. 131 Year 2012 regarding RAD GRK, the government of Jakarta has been implementing a number of mitigation activities to reduce GHGs emission. These RAD GRK activities are the work plan document to direct various activities intended to directly and indirectly reduce GHGs emission, in line with the regional development targets. RAD-GRK are implemented in various areas as follows: (a)

³⁹ Dokumen Rencana Pembangunan Jangka Menengah Daerah (RPJMD) DKI Jakarta 2013 – 2017, p178

households, (b) transportation, (c) industry, (d) commercial, (e) street lighting, (f) waste, and (g) green open space.⁴⁰

The data contained in Jakarta's 2014 Monitoring, Evaluation and Reporting of GHGs (PEP RAD-GRK) report show that the government of Jakarta undertook a number of actions with funding coming from the 2014 Regional Revenues and Expenditures (APBD DKI Jakarta). The report outlines 7 mitigation actions undertaken throughout 2014; they were the addition of busway units and energy-saving street lighting, energy efficiency in government's offices/buildings, green buildings (applied to the City Hall), utilization of landfill gas⁴¹ to generate electricity, waste composting, and 3R center (reduce, recycle and reuse). Such mitigation actions are included in the 2015 PEP RAD-GRK. There are, in fact, other mitigation actions implemented prior to 2014, which have been ongoing to date, and have resulted in reduced GHGs.⁴²

Climate change activities are widely disseminated and one that has been widely disseminated down to RW level (RW=community unit) is the Climate Village Program (ProKlim), which embodies action plans for mitigation and adaptation in Jakarta. Jakarta has so far developed 12 climate villages. The program is funded by the government as well as through cooperation with the private sector, such as Japanese company AEON Indonesia.⁴³

To ensure that climate change mitigation and adaptation activities are implemented as planned, the government of Jakarta conducted PEP RAD-GRK (monitoring, evaluation and reporting of GHGs) in 2015, which monitored and evaluated activities in the energy, transportation, waste and land sectors done in 2014 and the progress in the 2012-2013 PEP. The scope of Jakarta's PEP RAD-GRK is (1) identification of GHGs mitigation actions undertaken by the government of Jakarta in the energy, waste and land sectors; (2) methodology to calculate reduced emission as a result of Jakarta's mitigation actions in 2014 in the energy, waste and land sectors; (3) calculation of reduced emissions as a result of Jakarta's mitigation actions in 2014; and (4) development of Jakarta's 2014 PEP RAD-GRK report.⁴⁴

The mitigation actions were implemented in the energy-transportation sectors including busway; Intelligent Transportation System (ITS); energy-saving street lighting (PJU LHE); and solar power generators (PLTS) for governmental offices and schools, households in Sebiria Island, and street lighting; energy efficiency in governmental offices; and Green Buildings. In the waste sector, they were implemented in LFG, waste composting and 3R. In the land-based sector, they were implemented through creation of Green Open Space (RTH). All these mitigation actions were monitored, evaluated and reported by the government of Jakarta as mandated by RAD-GRK. These actions were intended to find out how the emission reduction target and objectives had been achieved, based on what was mandated by Government Regulation (PP) No. 39/2006 and Government Regulation (PP) No. 8/2008 regarding Stages, Formulation Procedures, Control and Evaluation of the Implementation of Regional Development Plan (PP 8/2008) and Home Affairs Minister's Decree No. 54/2010 regarding the Implementation of PP 8/2006. In addition to the above, the government of Jakarta had started the Climate City Program, specifically in coastal areas, which consisted of building flood control infrastructure, constructing and managing seawall, rehabilitating mangrove forests, and (still a plan) building Giant Sea Defense.

⁴⁰ Laporan Pemantauan, Evaluasi dan Pelaporan Rencana Aksi Daerah Penurunan Emisi Gas Rumah Kaca (PEP RAD-GRK) Provinsi DKI Jakarta, 2015

⁴¹ *Landfill Gas* (LFG) is byproduct of decomposing of waste composed of ~50% methane (CH₄), ~50% carbon dioxide (CO₂) and <1% non-methane organic compound (NMOCs) (See: <http://www.esdm.go.id/berita/323-energi-baru-dan-terbarukan/2741-pemanfaatan-gas-dari-sampah-untuk-pembangkit-listrik.html?tmpl=component&print=1&page=>)

⁴² Ibid, 2015

⁴³ Wartakota, Jakarta punya 12 Kampung Iklim, 20 Maret 2016

⁴⁴ Laporan Pemantauan, Evaluasi dan Pelaporan Rencana Aksi Daerah Penurunan Emisi Gas Rumah Kaca (PEP RAD-GRK) Provinsi DKI Jakarta, 2015.

3.1.4. Gender Considerations

3.1.4.1. Relevant policy framework

To date, no gender-responsive considerations have been incorporated into Jakarta's climate change policies. The government recognizes the difficulty in integrating gender issues into its climate change policies. Such confusion stems from the absence of tools that can be used to guide gender mainstreaming in policies, particularly climate change policies.

3.1.4.2. Identification of gender dimension in Jakarta City situations

It is critical to observe whether gender dimensions have been incorporated into various climate change policies and program due to the following reasons: (a) women and men suffer different levels of climate change impacts; and (b) women and men respond differently to climate change due to their gender roles. Furthermore, gender roles, which place women in domestic realm, very often make them excluded in decision-making in public realm despite the fact that climate change also affects them. These are the issues that need to be considered when developing climate change actions and it is critical to ensure that women are involved in the development of climate change mitigation and adaptation.

During climate hazards, such as floods and tidal floods, women are more affected than men. During floods, the sanitation system and the availability of clean water are limited, with the latter adversely affecting women's reproductive health. Similarly, the conditions in refugee camps are not favorable to women, in particular breast-feeding mothers and mothers with children, making them extremely insecure and uncomfortable. Also, declining incomes greatly affect women; they have to work harder to make ends meet for themselves and families due to the gender role attached to women.

In another area, extreme weathers greatly affect the coastal communities of Jakarta. Most of them are urban population engaged in sea fishing and have been living there for generations. They have had strong social bond among others by similar profession and kinship. Solidarity among them is built on the threat of declining incomes, or even loss of livelihood as a result of climate change or development programs.

Urban coastal population is mostly engaged in fishing, clam paring, and processing and distribution of the catch. Extreme weathers and strong winds have reduced their catch and threatened their houses. To make up for the declining incomes, coastal women are forced to take more than one job; sometimes 2-3 jobs on a daily basis (e.g. scavenger, laundry worker, trader). As a result, they have less time to rest and socialize.

Based on the socioeconomic conditions, women living in the coast of Jakarta are mostly of very low education level. They process and trade the catch of their own families or other fishermen. Their daily income ranges from IDR20,000 to IDR50,000 (or around Euro 1.39 to Euro 3.46), with most spent on basic needs.

BMKG (Indonesia's Agency for Meteorology, Climatology and Geophysics) provides weather information (weather, winds) for fishermen through SMS; however, women do not receive the information regularly so they cannot predict the weather and get prepared for floods. Similarly, they cannot predict when to plant and harvest clams.

Climate change has posed problems to female fishers due to uncertain weather and time to fish, declining amount of catch, and increasing production costs, hence declining incomes. Certainly, these adversely affect these sea-dependent women. Declining livelihood also leads to women losing social values and activities. In a patriarchal community, women are placed under their husbands' authority; they thus have no voice in the decision-making, both in the household and in fisher communities. They are even excluded in the decision-making at village and district levels. That women are not regarded as part of stakeholders prevents them from regularly accessing information on weather and sea conditions broadcast by the

government, particularly the meteorological agency, so that they cannot predict when to plant and harvest clams.⁴⁵

⁴⁵ Source: Solidaritas Perempuan, Dampak perubahan iklim terhadap perempuan nelayan di Cilincing, 2011

3.2. Climate Change Policies in Makassar City

3.2.1. General Overview

Makassar, the capital city of South Sulawesi Province, is situated in the southwest part of Sulawesi Island, one among the five largest islands of Indonesia. The city has a land area covering 175.77 km², including 11 islands in Makassar Strait, and 100 km² of sea area with 12 groups of islands. Administratively, it is divided into 14 subdistricts (kecamatan) and 143 villages (kelurahan). Seven of the subdistricts border the coastlines.

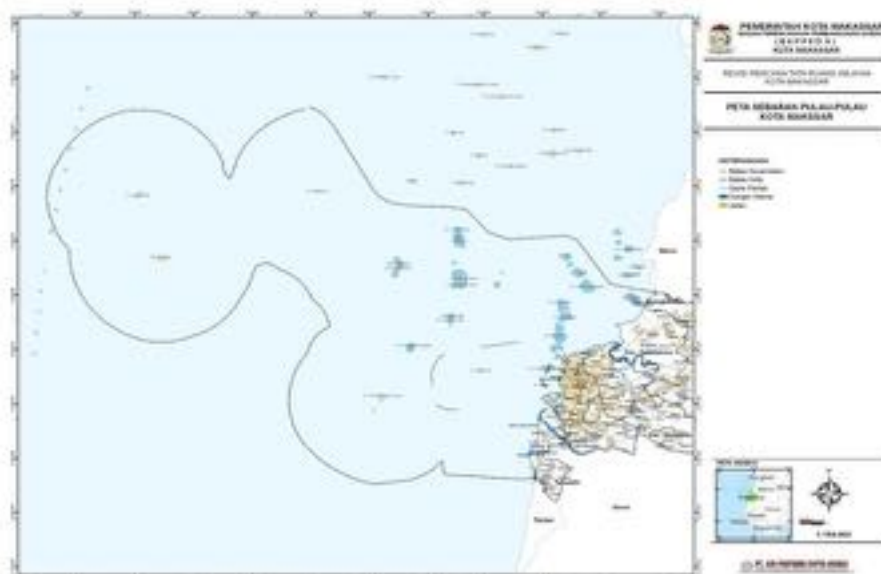
Figure 5.
Administrative Map of Makassar City



Source: Makassar Regional Mid-Term Development Plan 2014-2019

The detailed distribution of Makassar's islands is given in the following table:

Figure 6.
Makassar's Island Distribution Map



Source : Makassar Regional Mid-Term Development Plan 2014-2019

Makassar is the center of government as well as economic growth center not only for Sulawesi but also for the eastern part of Indonesia. As such, Makassar has an agglomeration of people from many different ethnic groups from Sulawesi, eastern Indonesia, and other regions. The city is populated mostly by Makassarese and Buginese; the remainder are Torajan, Mandarese, Butonese, Chinese, Javanese and other ethnic groups. Socially and economically, the population is divided into two main groups: urban and coastal communities; the latter live on the surrounding islands with high population density.

Makassar is Indonesia's fifth most populous city after Jakarta, Surabaya, Bandung and Medan⁴⁶. The city population grew 1.5% during 2013-2014. The population growth rate for South Sulawesi province during the period was lower than that of Makassar, standing at 1.08%. Based on the data from the city administration⁴⁷, the 2015 population totaled 1,449,401 people, comprising 717,047 men (49.47%) and 732,354 women (50.53%), with 278,530 households comprising 241,462 male household heads and 37,068 female households.⁴⁸

The population of the city was not evenly distributed, with Tallo and Ujung Tanah being the most populous sub-districts; both were slum sub-districts along the coast of Makassar. Tallo had population density of 23,773 people across its 5.83 km² area, while Ujung Tanah had the density of 8,229 people across its 5.94 km² area⁴⁹. These data are, however, different from those contained in Makassar's 2015 RAD API-PRB, which stated that 58,268 households lived in slum areas along the tidal-flood coast and rivers.⁵⁰

Based on the socioeconomic indicator data, the number of poor people in 2014 was 64,230⁵¹, most of whom were fisher communities.

Based on the 2014 welfare indicator data, 98.57 percent of the 7-12 age group went to school. The school participation rate among the 13-15 age groups stood lower at 96.78%. The lowest school participation rate was among the 16-18 age group, which only fetched 71.08%. Most of the 7-18 age group dropped out due to their low socioeconomic status; they chose to work to help their families. The literacy rate in 2014 stood at 97.62% for women and 99.13% for men. Among old women, the illiteracy rate stood at 1.64%⁵².

The city's labor force participation rate in 2014 show that of 100 people of the working age group, men accounted for 72.18%. The unemployment rate stood at 8.06% and 15.63% for men and women respectively. Of all the labor force, 31.96% was absorbed by the trade sector, with the service sector absorbing 36.96%. The other sectors (construction, transportation, warehouse and communication, finance, insurance, lease, corporate buildings and services) absorbed 25.05% of the labor force⁵³.

⁴⁶ Wahidah Rustam, *Perlindungan Hukum Pemberdayaan Ekonomi Perempuan Pesisir di Kelurahan Cambaya-Kota Makassar*

⁴⁷ BPS, *Kota Makassar dalam Angka 2016*

⁴⁸ Badan Pemberdayaan Perempuan dan Perlindungan Anak Kota Makassar, *Statistik Gender Kota Makassar 2016*, hal 39

⁴⁹ *Statistik Daerah Kota Makassar 2016*, p21

⁵⁰ *Rencana Aksi Daerah Adaptasi Perubahan Iklim dan Penanggulangan Resiko Bencana (RAD API-PRB) Kota Makassar Tahun 2015*, p17

⁵¹ *Kota Makassar dalam Angka tahun 2016*, p205

⁵² BPS Kota Makassar, *Indikator Kesejahteraan Rakyat Tahun 2015*, p39-41

⁵³ BPS Kota Makassar, *Indikator Kesejahteraan Rakyat Tahun 2015*, p46-47

3.2.2. Makassar and Climate Change

3.2.2.1. Climate Hazards affecting Makassar City

Makassar is situated in the temperate-to-tropical climate region, with the annual average temperatures during the last 10 years ranging from 24.5°C to 28.9°C and extreme rainfall. The period from November to February is the wettest, often submerging some of the city's areas.

Data over the last 14 years from BMKG shows that floods and strong winds have been common climatic phenomena which cause damages and financial loss to the citizens. From 1999 to 2013, twenty-six flooding incidents were recorded, destroying 324 houses and affecting 6,476 people. The worst and most recent flood, however, occurred January 2013, affecting 5,763 people. The most affected areas were coastal and riparian areas, and lowlands with bad sewerage. The January flood mainly hit most of the new settlements in converted lands on the outskirts and reclaimed areas.

Sea level rise has also been threatening the coastal areas of the city, with the southern coast being the most vulnerable. The current sea level rise averages out at 157 cm. It is predicted that in the next 100 years, the figure would rise to 267 cm, posing a threat to low basins 2.5 m below the sea level.⁵⁴

Climate threats in Makassar can also be seen in the intensity of strong winds. During 2003-2012, twenty-one incidents of violent storm were reported, killing 180 people and devastating 384 houses.⁵⁵ Other potential natural disasters include floods, abrasion, earthquakes and tsunamis, high tides and landslides.

Figure 7.
Map of Areas Threatened by Sea Level Rise



Source: Makassar Regional Mid-Term Development Plan 2014-2019

As can be seen in the map above, sea level rise will potentially occur throughout the year, meaning that climate change will cause extreme weathers (floods and droughts), posing real threats to the city.

⁵⁴ RPJMD Kota Makassar Tahun 2014 - 2019

⁵⁵ RAD API-PRB Kota Makassar Tahun 2015

3.2.2.2. Greenhouse Gases Emission Produced by Makassar City

GHGs Emission Inventory Institutions in Makassar

Under Presidential Decree (Perpres) No. 71 Year 2011, the governor, regents and mayors are responsible for coordinating data processing on GHGs emission, based on their respective main tasks.

The government of Makassar followed up the decree by creating a team to implement climate change mitigation activities and GHGs emission inventory through the decree of the Head of the City Environmental Agency (BLHD) No. 660.4/1103/BLHD/VI/2015 regarding Creation of the Implementing Team of Climate Change Mitigation Activities and GHGs Emission Inventory in 4 Main Sectors. The inventory was undertaken collaboratively by BLHD, the city oil company (Pertamina), the Sanitation and Landscaping Office and DKP3.

Makassar's GHG Emission Inventory

Following up Perpres No. 61 Year 2011 regarding RAN GRK and Perpres No. 71 Year 2011 regarding GHGs Emission Inventory, the Governor of South Sulawesi issued Governor Regulation No.59 Year 2012⁵⁶ to reduce GHG emissions in South Sulawesi in 3 (three) sectors: (1) land-based sector, (2) energy-based sector, and (3) waste-based sector. The 2020 provincial projection based on a BAU scenario without mitigation intervention shows that the energy sector is the largest GHGs emitter with 49%. The land-based sector comes second with 44% and the waste-based sector comes last with 7% of the Province's 2020 BAU⁵⁷.

GHG inventory in South Sulawesi covers 4 main sectors: energy; AFOLU (Agriculture, Forestry and Land Use); waste and industry; and product use.

The energy sector:

In the transportation sector, emissions from fossil fuel combustion (premium, pertamax, solar, bio-solar and marine fuel oil) stood at 2.39 (Gg CO₂ eq) in 2014. The data on emissions from the industry are not available as industries operating in Makassar have yet to have sewer from which the discharge can be calculated.

The Agriculture, Forestry and Land Use (AFOLU) sector

Based on the 2014 data, the sector contributed 36 Gg CO₂ eq of emissions, mostly coming from use of urea fertilizers and livestock⁵⁸.

The waste management sector

Based on the 2014 emission status inventory, the 1,548,622 tonnes of waste collected in the landfill were estimated to emit 461,437 ton Co₂-eq of GHG.

GHGs Trend in Makassar City

During a 2-year period starting from 2012 to 2014, the GHG emission status in Makassar show an upward trend annually. In 2013, the transportation sector emitted 2.8 Gg CO₂ eq., and the trend went upward to 3 Gg CO₂ eq. in 2014. In the waste sector, the total 1,548,622 tonnes of waste in the landfill in 2014 is estimated to have emitted 461.437 tones CO₂ eq. In the AFOLU sector, the emissions were calculated from livestock and use of urea fertilizers, with the latter emitting 62 Gg CO₂ eq of GHGs in 2011. In 2012 the emissions fell to 5 Gg CO₂ eq but kept increasing to 12 Gg CO₂ eq. in 2013, and to 36 Gg CO₂ eq. in 2014.⁵⁹

⁵⁶ Potret Rencana Aksi Daerah Penurunan Emisi Gas Rumah Kaca (RAD-GRK), Januari 2014, p20

⁵⁷ Potret Rencana Aksi Daerah Penurunan Emisi Gas Rumah Kaca (RAD-GRK), Januari 2014, p155

⁵⁸ *ibid*, p28

⁵⁹ Laporan kajian dampak perubahan iklim (inventarisasi GRK dan Bahan Perusak Ozon) BLHD Kota Makassar 2015, p1

3.2.3. Makassar City Responses to Climate Change

3.2.3.1. Governance and Services

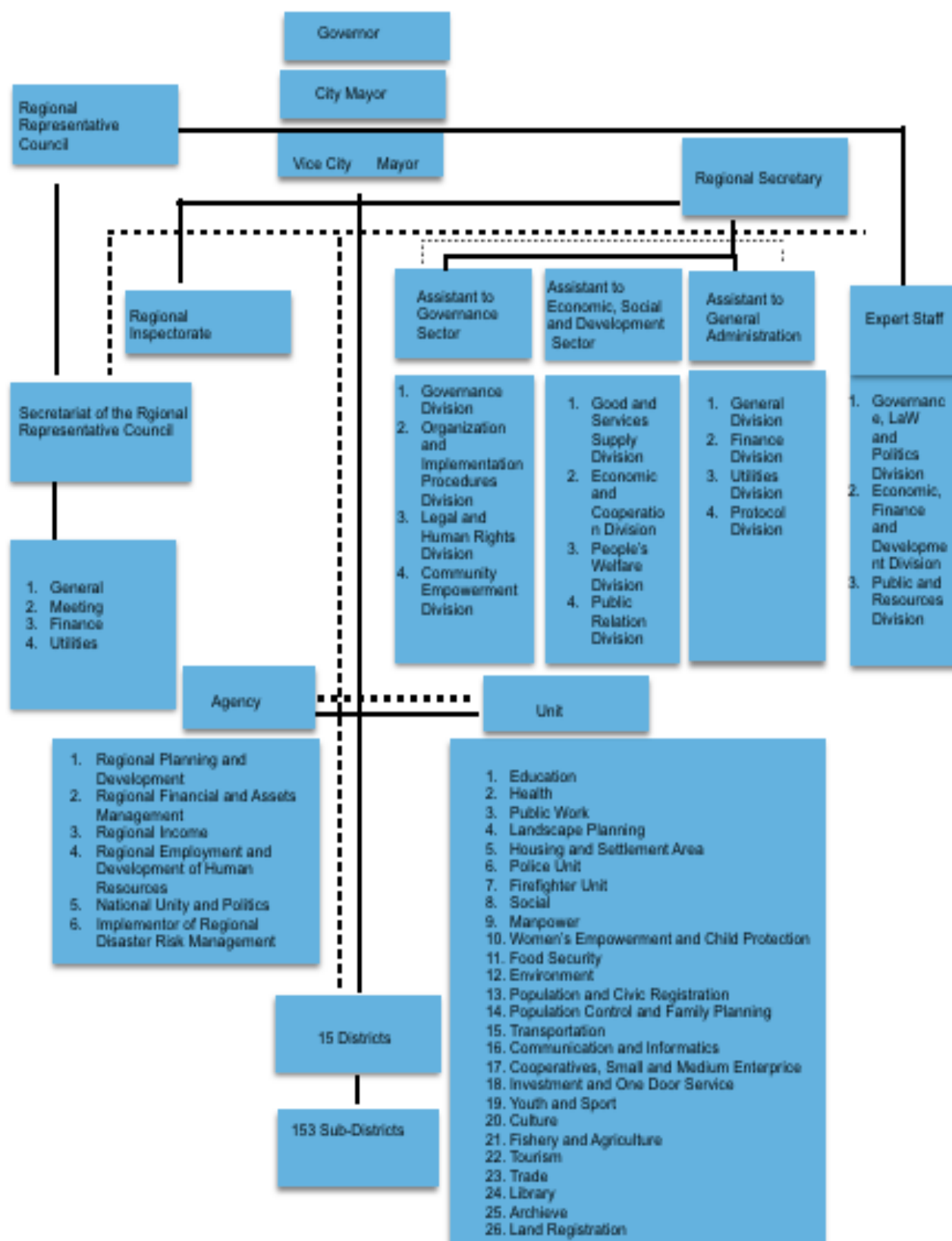
Makassar city is the capital of South Sulawesi province. It is the largest metropolitan city in eastern Indonesia. The city is led by a City Mayor, and assisted by a Regional Work Unit under the direct coordination of the Mayor. This Unit is composed of the Regional Inspectorate, Regional Secretary, Agency, District and Sub-District. This composition is stated in the Regulation of Makassar City No. 8/2016 on the Establishment and Composition of Regional Unit. (See Figure . on the Structure of Makassar City Government

To implement climate change policies in Makassar, the city government has created a Working Group on Climate Change Adaptation (Pokja API) having the task of: (1) facilitating coordination among governmental agencies and between the agencies and non-government groups (academicians, NGOs, and community representatives); (2) making a synergy of various inter-agency activities; and (3) monitoring and evaluating the implementation, i.e. assessing program's achievements and impacts in a measurable and structured manner. The working group consists of three sub-groups: (1) mitigation, (2) emergency situations and disaster, (3) data and monitoring. The working group was created as a result of the 2015 workshop on RAD API-PRB organized by Makassar's BAPPEDA.

Pokja API is directly overseen by the mayor – the person in charge – and coordinates three governmental bodies and offices as follows:

- Regional Disaster Management Agency (BPBD) on the Head of Mitigation and Disaster Management, which is responsible for coordinating the program and its associated mitigation activities. The mitigation sub-group also involves BLHD, DPU, DTRB, DKP and DKP3.
- The Social Office and BPBD, which are responsible for coordinating the program and emergency-related activities and post-disaster management. The emergency and post-disaster sub-group also involves BPM, SAR, the Health Office and NGOs.
- The Statistics and Reporting Division of Bappeda, which is responsible for coordinating the program data processing and monitoring. The data and monitoring sub-group also involves BPS, BMKG, BLHD and NGOs.

Figure 8.
Structure of Makassar City Governance



Source: Organization and Administration Section of Makassar City Government, 2017

3.2.3.2. Climate Change Policies and Actions Plans

City-Level Commitments, Strategies and Priorities

The commitment of the provincial government of South Sulawesi in combating climate change is manifested in the following policies:

- Climate Change Mitigation Policy. GHGs emission has been reduced as a result of Governor Regulation No.59 Year 2012. The reduction comes from 3 (three) sectors: (1) land-based sector, (2) energy-based sector, and (3) waste-based sector. The provincial 2020 emission projection based on a BAU scenario without mitigation actions shows that the energy sector will be the largest emitter of GHG emission, fetching 49%, followed by the land-based sector and the waste-based sector, which will account for 44% and 7% of the province's 2020 BAU emissions.⁶⁰ The mitigation priority is given to the energy sector, with main focus being on transportation.
- The government of Makassar has also translated RAN API into its regional action plan (RAD API PRB) as the manifestation of its commitment to combating climate change. RAD API-PRB contains 7 strategies to meet the targets: 1) Improvement and Expansion of Green Open Space (RTH), 2) Improved Quality of Public Infrastructure and Service Deliveries, 3) Improved Socioeconomic Welfare, 4) Increasing Public Participation, 5) Improved Institutional Capacity of Governmental Agencies, NGOs and CSOs, 6) Conservation and Improved Environmental Quality, and 7) Strengthening and Enforcement of Regulations and Law.⁶¹

Specifically, Makassar's Environmental Agency (BLHD) has developed the following programs in its 2014-2019 Strategic Plans: 1) Oversight and Monitoring of Environmental Quality, 2) Assessment and Development of Environmental Data/Information, 3) Public Service Delivery, 4) Enhanced Climate Village (ProKlim), 5) Conservation, Rehabilitation and Rehabilitation of Natural Resources, and 6) Pollution Control.⁶²

Implementation

Based on RAN API, the government of Makassar has planned a number of strategies and programs, which are currently being implemented,⁶³ among others:

⁶⁰ Dokumen publikasi Potret RAD-GRK, Sekretariat RAN-GRK, Januari 2014

⁶¹ RAD API-PRB Kota Makassar Tahun 2015

⁶² <http://blhdmakassar.info/program-rencana-strategis/>

⁶³ RAD API-PRB Kota Makassar Tahun 2015, 12-22

- Expansion of Green Open Space through the following programs: (a) the 'Lorong Garden' program aims to create gardens along the alleys, which have limited open space. This is to provide the vulnerable poor people, female household heads, children, the elderly and people with disabilities with improved living conditions, as well as improving the quality of slum areas and city infrastructure, facilities and utilities; (b) the Mangrove Reforestation Program in coastal areas aims to improve environmental quality, fishermen's resilience and fisheries, and protect coastal areas from abrasion and sea level rise; (c) the Tree Planting Program aims to plant trees in arid areas to make the city cooler and more comfortable; expand green open space and recreational areas (parks); reduce vulnerability, dryness and heat; and improve the overall environmental conditions of the city.
- Improved quality of infrastructure and public service deliveries through the following programs: a) the Emergency Center help citizens prepare for disasters; b) Construction of Basic Facilities and Infrastructure in the outskirts and disaster-prone areas aim to increase access to basic infrastructure (clean water facilities, roads, electricity); and c) Construction of Seawall aims to protect the coast of Barang Caddi Island.
- Improved socioeconomic welfare, by: a) restoring productive economics after disasters; b) implementing social rehabilitation and reconstruction for the affected people; c) providing training of effective and efficient technology for fishermen and optimizing product management and marketing; d) fostering fisheries and providing fisheries extension (courses); and e) providing working capital for community groups.
- Increasing public participation, by a) providing training of disaster prevention and management; and b) publicly disseminating climate change adaptation information.
- Improved institutional capacity of governmental agencies, NGOs and CSOs through creation of climate villages to build the village communities' capacity in responding to climate change.
- Conservation and improved environmental quality through monitoring the environmental quality in coastal areas and small islands as part of efforts to mitigate disaster risks in coastal areas.

Efforts to reduce vulnerability and increase climate change adaptation capacity that consider gender aspects in the planning and implementation are taken through the following activities:

- Improving the socioeconomic welfare of the vulnerable group by increasing their capacity to have economic access. These groups include poor fishermen, informal workers, female household heads and people with disabilities. The program will also assist the target communities to develop fisheries and will provide fisheries extensions and support for community groups to increase their adaptation capacity from socioeconomic aspects.⁶⁴
- Improving the quality of infrastructure and public service deliveries in disaster management, in particular with regard to emergency responses for the affected people by ensuring fulfillment of specific needs for women and other vulnerable groups. Women will have access to and benefit from emergency responses.⁶⁵
- Increasing public participation, among others by raising community's awareness of climate change issues through provision of better access to information and capacity

⁶⁴ RAD API-PRB Kota Makassar Tahun 2015, p13

⁶⁵ RAD API-PRB Kota Makassar Tahun 2015, p16

building for the vulnerable groups so that they can be encouraged to increase their participation in environmental management and to build their adaptation capacity. Among the activities designed for women are training of disaster prevention and management, and of waste management, as well as dissemination of climate change adaptation information.⁶⁶

In addition to the above, through the RAN GRK policy, the government of Makassar has issued a decree to create an implementing body for climate change responses and GHGs emission reduction inventory (*Surat Keputusan No. 660.4/1103/BLHD/VI/2015 Kepala Badan Lingkungan Hidup Daerah Kota Makassar tentang Pembentukan Tim Pelaksana Kegiatan Dampak Perubahan Iklim dan Inventarisasi GRK*). The body will work in 4 main sectors: energy, AFOLU, waste and industry, and fertilizer use.

3.2.4. Gender Considerations

3.2.4.1. Relevant Policy Framework

The government of Makassar has a number of policies to mainstream gender, including in climate change policies and programs, as follows:

- Mayor Decree No. 37 Year 2015 regarding General Guidelines to Gender Mainstreaming in Makassar City Development. The guidelines guide each of Makassar's SKPD in planning and implementing the associated programs.
- Circular Letter of Head of Makassar's BPBD No. 050/342/XI/2015 regarding Involvement of Women and Children in Planning, Risk Assessment and Emergency Response Operations, and Provision of Logistics in disaster management in Makassar.
- The city's Women Empowerment and Children Protection Agency (BPPPA) has various climate change-related programs to improve the living quality of women with regard to environmental aspects. The programs include tree planting, monitoring of green open space, and development of climate villages (ProKlim).⁶⁷
- The city's 2015 Action Plan for Climate Change Adaptation and Disaster Risk Reduction (RAD API PRB) focuses on improving wellbeing to reduce the vulnerability of vulnerable groups such as fishermen, the coastal poor, and women, who include female household heads, coastal women, the elderly, and people with disabilities.⁶⁸

Makassar's RAD API has put gender aspects into consideration when planning and implementing vulnerability reduction and climate change adaptation strategies and programs. The programs aim to:

- Improve the socioeconomic welfare of the vulnerable group by increasing their capacity to have economic access. These groups include poor fishermen, informal workers, female household heads and people with disabilities. The program will also assist the target communities to develop fisheries and provide fisheries

⁶⁶ RAD API-PRB Kota Makassar Tahun 2015, p19

⁶⁷ Laporan Evaluasi PPPA Tingkat Kabupaten/Kota Periode :2015

⁶⁸ RAD API-PRB Kota Makassar Tahun 2015

extensions (courses) and support for community groups to increase their adaptation capacity from socioeconomic aspects.⁶⁹

- Improve and expand green open space through creation of gardens in alleys (the *Lorong Garden* program) to enhance the environmental quality in slum areas and to improve the living quality of the poor, who are more vulnerable, such as poor women, female household heads and people with disabilities⁷⁰.
- Improve the quality of infrastructure and public service deliveries in disaster management, in particular with regard to emergency responses for the affected people by ensuring fulfillment of specific needs for women and other vulnerable groups. Women will have access to and benefit from emergency responses.⁷¹
- Increase public participation, among others by raising community's awareness of climate change issues through provision of better access to information and capacity building for the vulnerable groups so that they can be encouraged to increase their participation in environmental management and to build their adaptation capacity. Among the activities involving women are training of disaster prevention and management, and of waste management, as well as dissemination of climate change adaptation information.⁷²

3.2.4.2. Identification of Gender Dimensions in Makassar City Situations

The impacts of climate hazards such as extreme rainfalls, prolonged droughts, floods, sea level rise and strong winds are real to the citizens of Makassar. Clean water gets scarce as a result of prolonged droughts. Lack of information from BMKG has also influenced the fishing situations of the fishermen. Unpredictable weathers have adversely affected the economics of coastal communities, both men and women.

A scientific paper identifies gender dimensions in Makassar, noting that:

- Women are facing lack of clean water, environmental health problems, indecent housing and surroundings, and absence of waste management;
- The participation level of urban coastal women in decision-making is still low, notably in Cambayya and Tallo villages;
- Women are facing domestic violence;
- Women are playing the main role in taking care of their families and generating incomes;
- Women are facing declined incomes;
- Offers from money lenders might at the end lead women more vulnerable to violence when they cannot afford to pay back the money with high interests.

Women involvement in climate change programs is mostly done through programs developed and implemented by family welfare empowerment movement (PKK) such as tree planting, empowerment of women's economics through utilization of marine products (e.g. shells), and alley gardens. Empowerment of women's economics is focused on

⁶⁹ RAD API-PRB Kota Makassar Tahun 2015, p18

⁷⁰ RAD API-PRB Kota Makassar Tahun 2015, p13

⁷¹ RAD API-PRB Kota Makassar Tahun 2015, p16

⁷² RAD API-PRB Kota Makassar Tahun 2015, p19

helping coastal women to improve their economics so they can adapt to climate change. Among the adaptation programs designed for women are provision of hand-skills training to utilize marine products commercially, and provision of production tools such as ovens, freezers, scales, packaging tools, and others.⁷³

Specifically, coastal communities, including those in Cambaya and Tallo are facing problems whose impacts are greater on women than on men. Among the problems are lack of clean water, environmental health problems, indecent housing and surroundings, waste management, low participation in decision-making, domestic violence, declined catch and hence declined incomes, and massive offers from money lenders. All these problems add to women's burden of managing household's economics.

It is these coastal poor women facing the problems above who are the beneficiaries of Makassar's vulnerability reduction and climate change adaptation programs. Despite the programs, the women feel they have had no concrete benefits of the programs. The programs, according to them, have been unable to address their specific situations and needs, and the programs were not built upon their aspirations. They said, among others, that the programs are made part of PKK's programs as noted above, and that the economic empowerment programs through provision of working capital (through the save-and-loan program) to help the borrowers process marine products are funded by the World Bank. The CCDP-IFAD (Coastal Community Development Project – International Fund for Agricultural Development) program, through which women are provided with skill building and production tools, such as ovens, freezers, scales and packaging tools, are also funded by the World Bank.⁷⁴

⁷³ Wahidah Rustam, Karya Ilmiah Tentang Perlindungan Hukum Pemberdayaan Ekonomi Perempuan Pesisir di Kelurahan Cambaya-Kota Makassar, 2016

⁷⁴ *ibid*

Chapter 4. Conclusion

From the elaborations above, the author team has drawn the following tentative conclusions:

4.1. Gaps and Knowledge Challenges

Gaps and challenges found in this process are as follows:

- There are gaps in some of the government's documents available. They contain different data on the demographic and socioeconomic conditions, including the disaggregated data on poverty in Makassar City;
- Some of the documents and data needed for the study were not available at the relevant agencies, including accessible documents and sources on the integration of gender in climate change programs;
- Information on the government's websites (of both Jakarta's and Makassar's agencies) is not updated regularly, in particular that on climate change programs;
- Searching the government's websites for data was also challenging as not all data to be sought were available. One example is the data from Makassar's Central Statistics Bureau, in which the researchers did not find data on the city's population in 2016; the only city population data available are of the 2014;
- No documentation is available regarding the GHG inventory in Climate Change Impact Assessment Report (GHG and Ozone-Depleting Substances Inventory) prepared by BLHD Kota Makassar in 2015. Many of the data owned by the government are those on ozone-depleting substances, and are used by the government (16 agencies), the industry (31 enterprises), and hotels (16).
- Makassar's GHGs Inventory has no complete data on the emissions produced, in particular by industrial sources.

4.2. Conclusion

While gender is being mainstreamed in RAN API, the existing regulations, for example Presidential Decree No. 61 Year 2011 regarding RAN-GRK and RAN-API, have yet to take women as part of the stakeholders in climate change-related policy-making processes. Women are not provided with adequate information on climate change and its associated impacts, nor are they involved in policy-making. As a result, women's experience in responding to climate change impacts, as well as in preventing and adapting to them, are very often ignored and excluded in government's policy-making.

Overall, we can see that both Jakarta and Makassar have had policies and programs to combat climate change. Both cities have been and are still implementing their mitigation and adaptation programs, one of which is the climate village program (ProKlim). Some of the programs have involved women in the implementation.

Women are involved in climate programs; yet, no urban policies have been in place which are gender-responsive or which have taken women as part of the stakeholders in the development of decisions relating to urban policies and programs to combat climate change.

4.3. Key Questions

As a result of the study, the researchers raise some questions:

- Do the governments of Jakarta and Makassar have urban-specific policies?
- Have there been sufficient gender segregated data which devise strategies that can address the conditions and needs of vulnerable groups?
- Have women been provided with detailed information, been involved or fully participated in the development, implementation and evaluation of the programs?
- Has the planning and implementation of climate change mitigation and adaptation programs in Jakarta and Makassar considered integrating gender, including assessing gender risks and impacts?
- Have the programs considered women's different capacity?
- How far have gender dimensions been considered in the policies and by the implementing institutions with regard to the following: (a) women are affected by climate change differently than men; (b) women are responding to climate change differently than men due to different gender roles and responsibilities, in which women build their resilience to climate change; (c) women are affected differently than men, and are involved differently in various climate change mitigation activities in Makassar; and (d) the segregated gender data available?

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Annex 1.



Gender Into Urban Climate Change Initiative Status Quo Report on Pilot Cities

Please note:

- * There should be a clear distinction between this report and the gender assessment which may include evaluation and judgements
- * The Status Report should be based on facts, providing evidence and sources of information, but no judgements at this point!
- * At the end of the Status Report, you can include questions and raise concerns

Contents and Suggested Structure

1. **OVERVIEW: Gender Into Urban Climate Change Initiative (GUCCI) & Planned Gender Assessment**
2. **PILOT CITY X**
 - 2.1. **General information**
Location, size, population, etc
 - 2.2. **Socioeconomic factors**
Poverty, social problems, gender dimensions, for instance number of female-headed households, women's situation in informal settlements, etc
If no local data are available, it would be good to refer to some key national data on gender discrimination
3. **CLIMATE CHANGE IN CITY X**
 - 3.1. **Climate hazards affecting city X**
List the most important effects of climate change impacting the city
 - 3.2. **Greenhouse gas emissions of city X**
Has an inventory of greenhouse gas emission been prepared? If yes, what sectors does it cover and what are the main findings?
4. **THE CITY'S RESPONSE TO CLIMATE CHANGE**
 - 4.1. **Governance and services**
How the city and local decision-making is structured, in particular which departments and bodies are in charge of climate matters; and whether key services (water, electricity, transport) are city-owned and led or privatised.
 - 4.2. **Climate policies/action plans**
 - 4.2.1. **National framework**
If relevant, eg. If national plans such as INDC/NDC mention city-level action or priorities
 - 4.2.2. **City-level commitments, strategies, priorities**
 - 4.2.3. **Implementation**
 - 4.3. **Gender considerations**



Aksi! for gender, social and ecological justice is critically involved in debates and discourses on development and climate change finance. The objective is to ensure protection of the rights of women and the affected people and to support the latter's actions for gender, social and ecological justice. **Aksi!** was initiated in April 2012 by five Indonesian feminists.



Solidaritas Perempuan is a feminist organization founded in 1990. Taking the form of an association, it currently has 781 members (of both sexes) and 11 communities/regional chapters across the country, including Jakarta and Makassar.

Solidaritas Perempuan aims to fight for the rights of women and marginalized groups suffering from deprivation and injustice; it works to establish justice for women and marginalized groups, including ecological and climate justice.



Solidaritas Perempuan Anging Mammiri Makassar, founded in 2000, is one of SP communities based in Makassar City, South Sulawesi. It works to fight for the rights of coastal women/fisherwomen, women farmers, female migrant workers and women unfairly treated by discriminating regulations.



Solidaritas Perempuan Jabotabek (Jakarta-Bogor, Tangerang-Bekasi) was founded on 4 May 2004 and with its 46 members it fights for and promotes the rights of women and marginalized groups. **Solidaritas Perempuan Jabotabek** works closely with urban coastal women, women farmers, rural women, and urban poor women by observing women's situations, including those resulting from climate change.